ARCHER, CATHRO
& ASSOCIATES (1981) LIMITED
CONSULTING GEOLOGICAL ENGINEERS

1016 - 510 WEST HASTINGS STREET, VANCOUVER, B.C. V6B 1L8 TEL (604) 688 - 2568 • FAX (604) 688 - 2578

093869 1/5

ASSESSMENT REPORT

describing

GEOLOGICAL MAPPING, PROSPECTING, SOIL GEOCHEMISTRY, AND DIAMOND DRILLING

on the

ICE PROPERTY

Latitude 61°53' N; Longitude 131°21' W

NTS 105G/13 and 14

in the

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

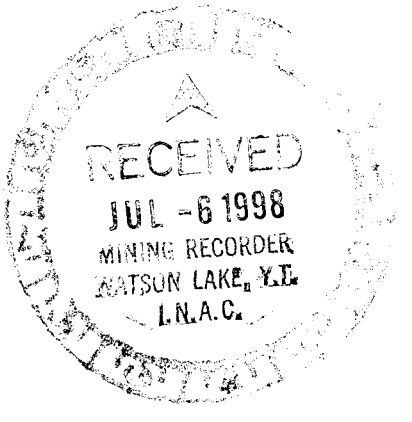
Prepared by

Archer, Cathro & Associates (1981) Limited

for

EXPATRIATE RESOURCES LTD.

T. C. Becker, B.Sc., P. Geo.
May, 1998



BOX 4127, 2054 SECOND AVENUE, WHITEHORSE, Y.T. Y1A 3S9 TEL (403) 667 - 4415

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INTRODUCTION

Expatriate Resources Ltd. has a 100% interest in the Ice property which consists of 1105 claims protecting a Cyprus-type volcanogenic massive sulphide (VMS) occurrence, called the Ice Deposit. The first claims were staked in early 1996 to cover a previously unstaked copper soil geochemical anomaly selected from information documenting results of a 1973 joint venture managed by Archer, Cathro & Associates Limited. A company geologist discovered secondary copper mineralization in spring 1996 close to the reported location of the 1973 soil sample. Exploration during summer and fall 1996 consisted of claim staking, geological mapping, prospecting, linecutting, soil geochemistry, ground geophysical surveys, airborne geophysical surveys and 2704.35 m of diamond drilling in 34 holes (Eaton and Pigage, 1997).

This report describes an exploration program conducted in the immediate vicinity of the Ice Deposit during summer and fall 1997 which included geological mapping, prospecting, linecutting, grid soil geochemistry, a UTEM survey, water quality testing, construction of drill access roads and 7879.38 m of diamond drilling in 87 holes. This program was done in conjunction with geological mapping, prospecting and reconnaissance soil sampling covering the remainder of the Ice property, which was reported separately (Becker, 1997). Both programs were managed by Archer, Cathro & Associates (1981) Limited and supervised by the author. Appendix I contains the Author's Statement of Qualifications.

The baseline environmental testing of the surface waters draining the Ice Deposit was contracted to J. Gibson and Associates while the UTEM survey was conducted by SJ Geophysics Ltd. and Lamontagne Geophysics Ltd. Reports describing this work appear in Appendices II and III, respectively.

PROPERTY, LOCATION AND ACCESS

The Ice property is located in southeastern Yukon at latitude 61°53'N and longitude 131°21'W on NTS map sheet 105G/13 and 14 (Figures 1 and 2). It is comprised of 1105 contiguous mineral claims covering approximately 23,000 hectares. Claim locations in the vicinity of the drill area are shown on Figure 3. The claims are 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 are listed below.

Claims Name	Grant Number	Expiry Date*
Ice 1-16	YB78632-YB78647	March 6, 2006
17-48	YB84405-YB84436	March 6, 2006
49-165	YB84880-YB84996	March 6, 2006
166FR	YB84997	March 6, 2006
167	YB84998	March 6, 2006
168FR	YB84999	March 6, 2006
169	YB85000	March 6, 2006
170FR	YB85001	March 6, 2006
171	YB85002	March 6, 2006
172FR	YB85003	March 6, 2006
173	YB85004	March 6, 2006
174FR	YB85005	March 6, 2006
175	YB85006	March 6, 2006
176FR	YB85007	March 6, 2006
177	YB85008	March 6, 2006
178FR	YB85009	March 6, 2006
179	YB85010	March 6, 2006
180FR	YB85011	March 6, 2006
181-212	YB85012-YB85043	March 6, 2006
213FR	YB85044	March 6, 2006
214-326	YB85045-YB85157	March 6, 2006
327-334	YB85158-YB85615	March 6, 2005
335-362	YB86186-YB86213	March 6, 2006
363-374	YB86878-YB86889	March 6, 2006
375-402	YB86214-YB86241	March 6, 2006
403-606	YB86242-YB86445	March 6, 2002
607-656	YB86890-YB86939	March 6, 2002

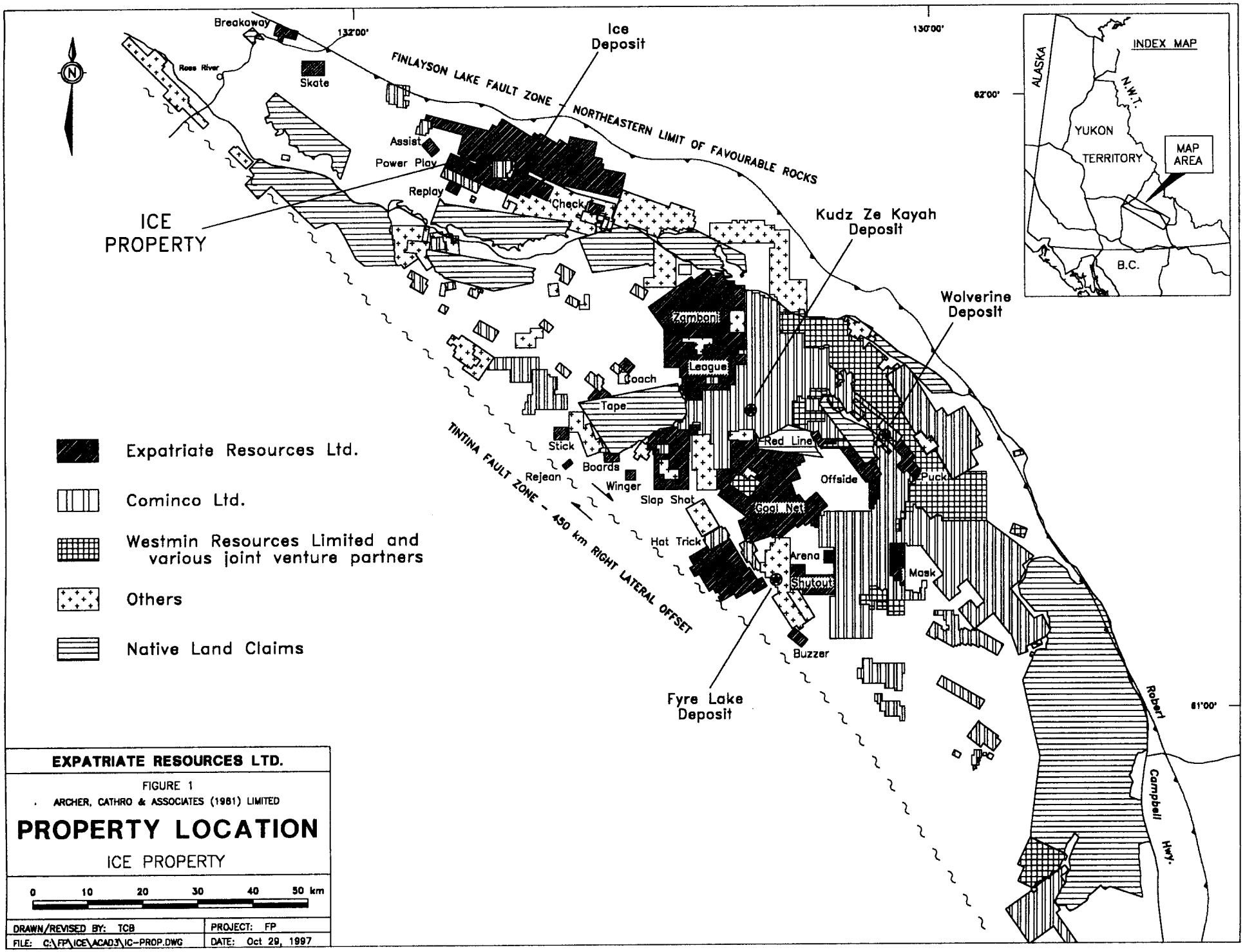

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FIGURE 1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY LOCATION

ICE PROPERTY

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-PROP.DWG	DATE: Oct 29, 1997

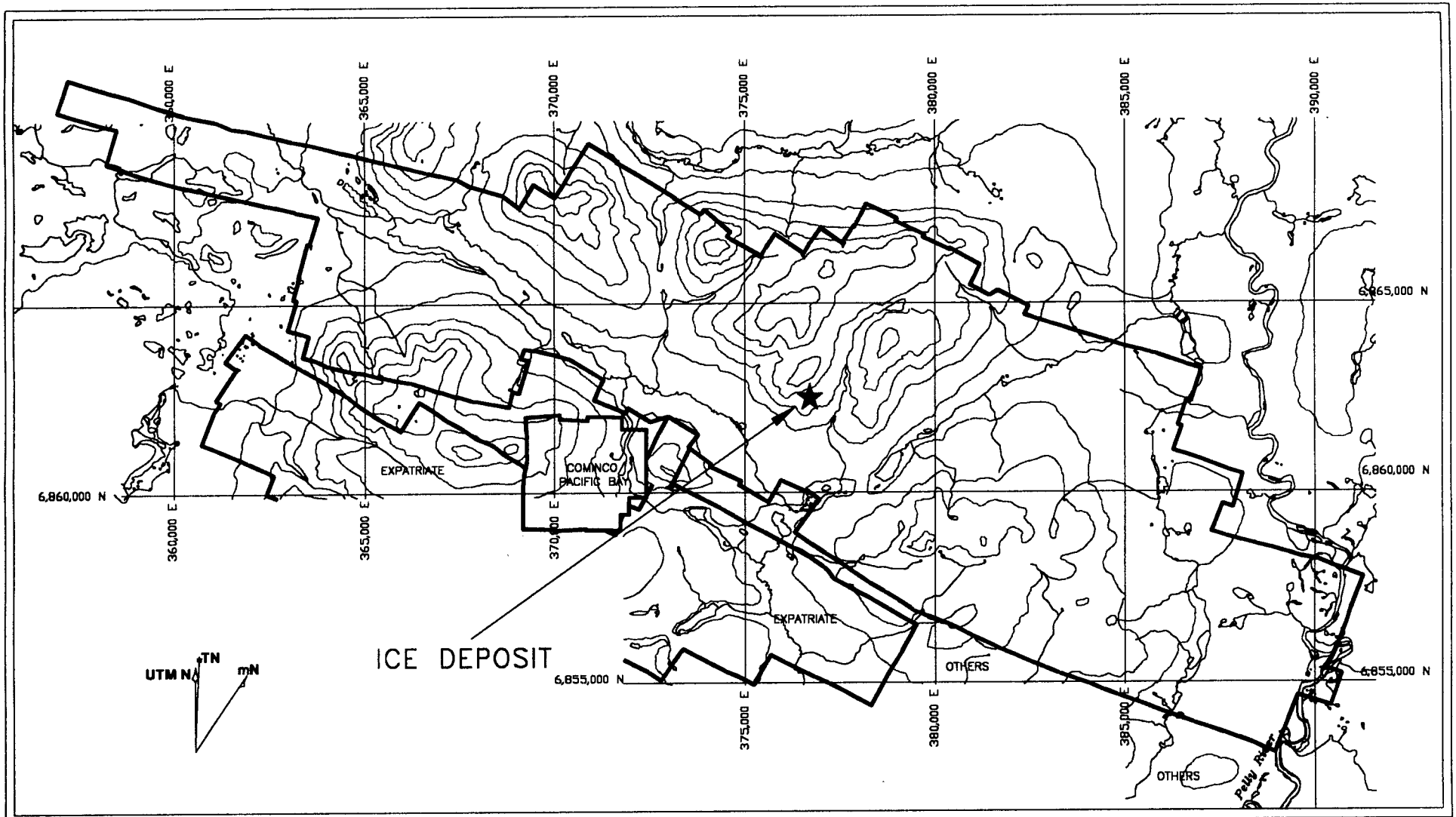

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FIGURE 2

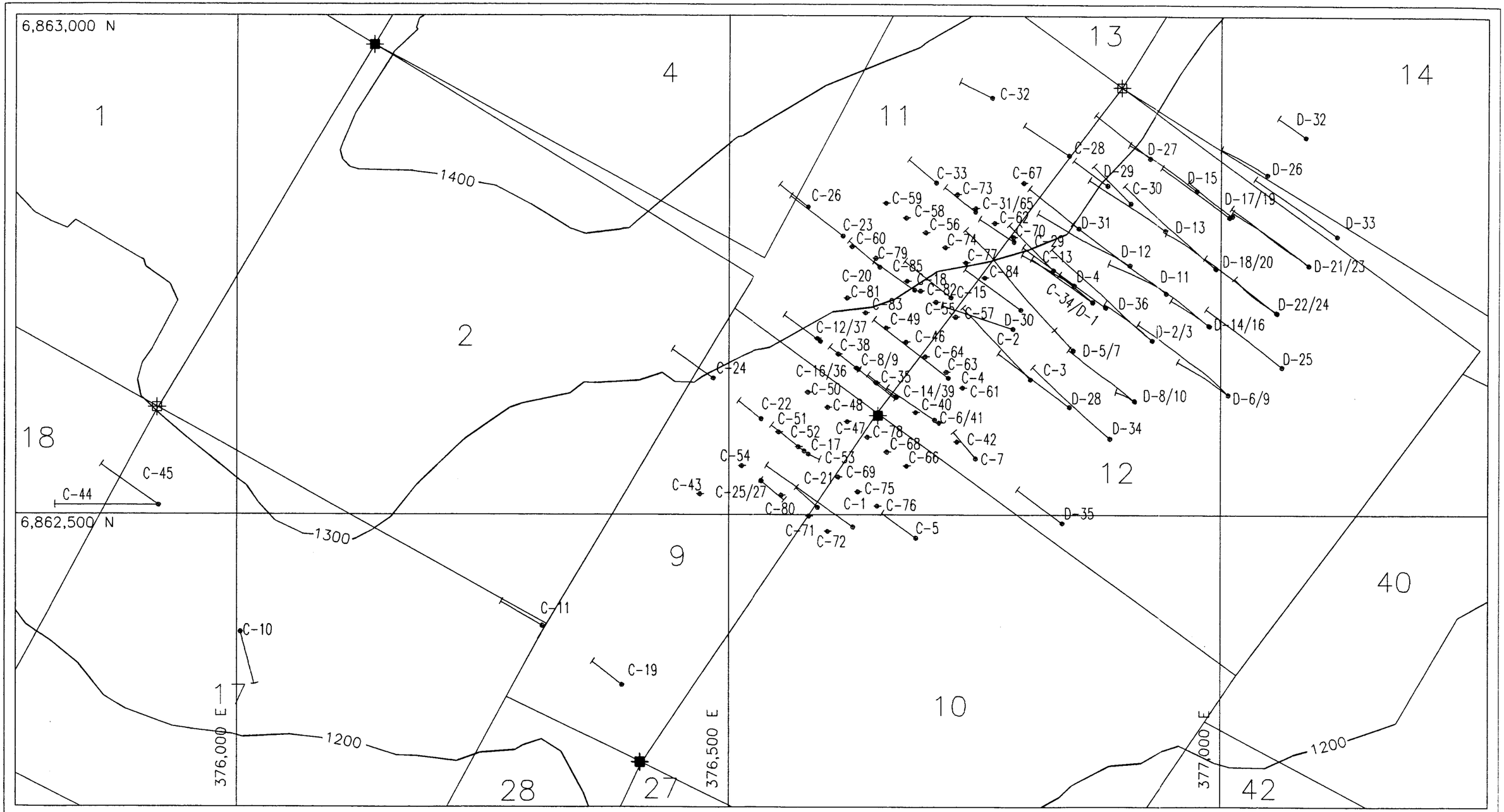
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY BOUNDARIES

ICE PROPERTY

0 1500 3000 4500 6000 7500 m

DRAWN/REVISED BY: LCP/TCB	PROJECT: FP
FILE: C:\FP\ASSIST\ACAD3\IC-CLAIM.DWG	DATE: Dec 11, 1997



- Claim posts with corrected GPS locations
- Claim posts with uncorrected GPS locations

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FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATION DRILL AREA

ICE PROPERTY

0 40 80 120 160 200 m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD\ICCLLDWG	DATE: February 24, 1998

Claims Name	Grant Number	Expiry Date*
Ice 657-714	YB86446-YB86503	March 6, 2002
715-758	YB86940-YB86983	March 6, 2002
759-766	YB86504-YB86511	March 6, 2002
767-776	YB86984-YB86993	March 6, 2002
777-790	YB86512-YB86525	March 6, 2002
791-802	YB86994-YB87005	March 6, 2002
803-909	YB86526-YB86632	March 6, 2002
910FR	YB86633	March 6, 2002
911	YB86634	March 6, 2002
912FR	YB86635	March 6, 2002
913	YB86636	March 6, 2002
914FR	YB86637	March 6, 2002
915-924	YB87006-YB87015	March 6, 2002
925FR	YB87016	March 6, 2002
926	YB87017	March 6, 2002
927FR	YB87018	March 6, 2002
928-954	YB87019-YB87045	March 6, 2002
955FR	YB87046	March 6, 2002
956	YB87047	March 6, 2002
957FR	YB87048	March 6, 2002
958-1041	YB87049-YB87132	March 6, 2002
1042-1071FR	YB87133-YB87162	March 6, 2002
1072-1079 FR	YB86638-YB86645	March 6, 2002
1080-1081FR	YB87693-YB87694	March 6, 2006
1082-1105	YB89308-YB89331	March 6, 2003

*The expiry dates include work filed for assessment credit but not yet accepted.

The 1997 program was conducted with helicopter support provided by Trans North Helicopters of Whitehorse. Spring mobilization was done with a Bell 206B Jet Ranger operating from a base in Ross River, 60 km west of the property. From May to October a Bell 206B was stationed at a tent frame camp located adjacent to the drill area on the property. The helicopter was used to support reconnaissance exploration and to ferry personnel and equipment to and from a staging area at the Mink Creek Airstrip, 18 km south of the camp at Km 279 on the Robert Campbell Highway.

In early March 1997 a Caterpillar D6 bulldozer owned by E. Caron Diamond Drilling Ltd. was mobilized to the property (Land Use Permit YA6F268). It was used to move drills, build drill sites and construct roads on the property. The access route extended 25 km from the Robert Campbell Highway to the camp, following pre-existing bulldozer trails for the first 19 km.

In May 1997 the Mink Creek Airstrip was cleared of small trees and graded (Land Use Permit YA7X311) so it could be used by short take-off and landing aircraft. Executive-type aircraft can use the government maintained IFR airstrip at Ross River while float-equipped planes can operate from Gonzo Lake, 4 km west of the Ice camp.

During the exploration program selected grid locations, contour soil geochemical sites and claim posts were surveyed using Trimble Geoexplorer GPS units. Field readings were corrected using base station data obtained from the Department of Renewable Resources (Forestry) in Whitehorse. GPS survey data appears in Appendix IV.

GEOMORPHOLOGY

The Ice property is situated in the Yukon Plateau approximately 30 km northeast of the Tintina Trench. The central part of the property straddles a series of low ridges while the eastern and western extremities cover broad swampy lowlands. Creeks in the western part of the property flow northerly into the Ross River. Those in the remainder of the claim block are tributaries of the Pelly River which crosses the eastern end of the claims before turning to the west and paralleling the southern property boundary. Local elevations range from 820 m on the banks of the Pelly River to 1585 m.

The entire property was covered by a continental ice sheet during Pleistocene time. The general direction of ice movement was from east to west but pre-existing topographic relief locally controlled flow directions. Till cover is patchy to absent at higher elevations but almost completely blankets the broad flat valleys.

Treeline is at approximately 1400 m. Vegetation in the main valleys alternates between mature stands of spruce and aspen where drainage is good to grassy meadows with broad fringes of dense buckbrush and stunted black spruce in swampy areas. South-facing slopes are well treed to 1350 m with buckbrush, slide alder and scattered trees at higher elevations giving way to grass and lichen above 1400 m. Vegetation transitions occur about 150 m lower on north-facing slopes.

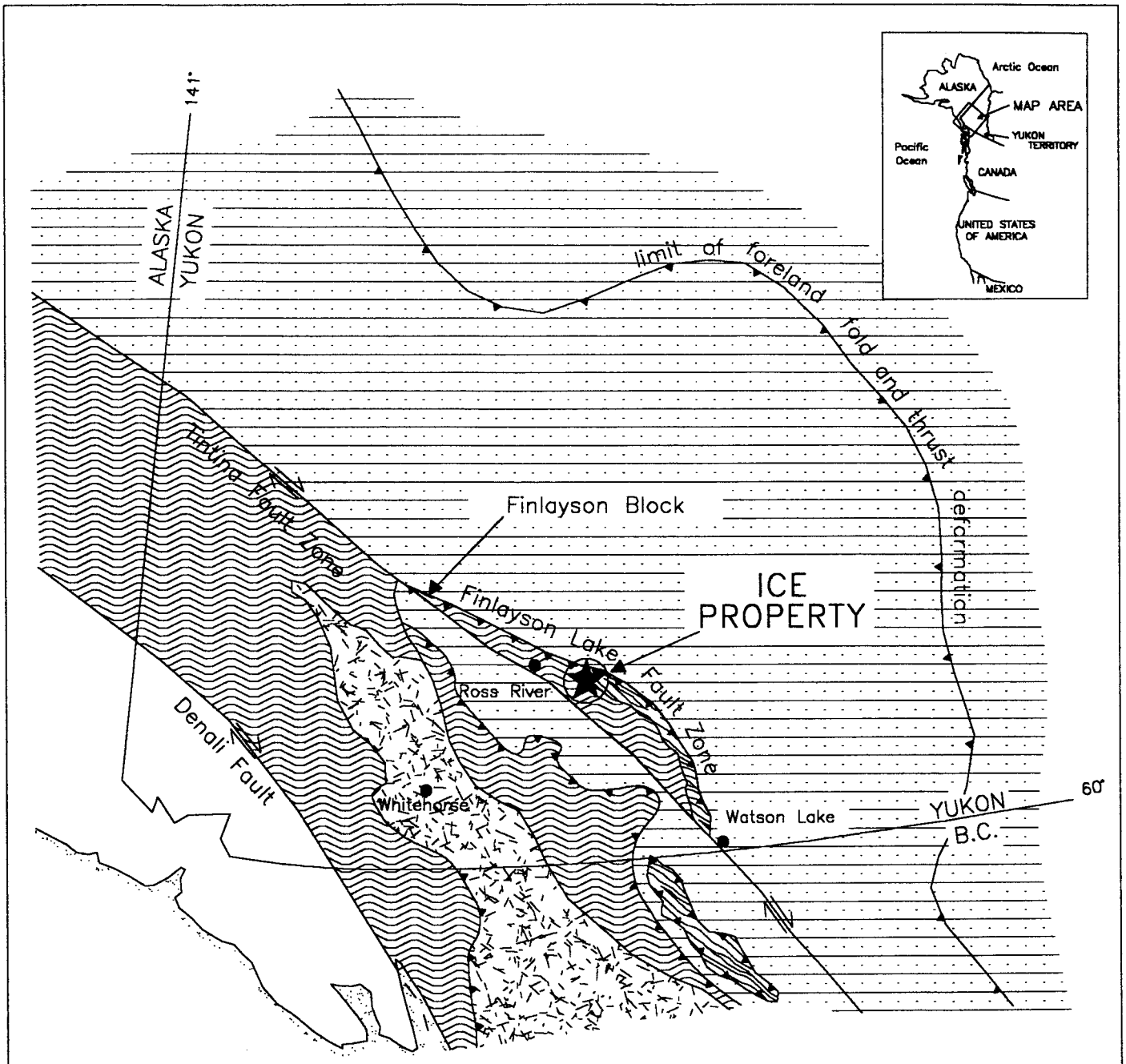
Climate in the Ice area is categorized as continental. It is characterized by relatively long cold winters with warm dry summers. Annual precipitation averages about 450 mm and occurs mostly as rain in summer. Snow cover rarely exceeds 60 cm. Permafrost is common in the area but is not pervasive. The local streams usually breakup in late May and freeze over in early November.

REGIONAL GEOLOGY

The Ice 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 4). 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 Zone, 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). Generalized regional geology is described in the following paragraphs and shown on Figure 5.

The Slide Mountain Terrane which hosts the Ice Deposit is comprised of disrupted oceanic crust and deep water sedimentary rocks. It includes variably strained, sub-greenschist to greenschist facies basaltic greenstone, ultramafic and mafic plutonic rocks, ribbon chert, argillite and minor marble. Mapping in various parts of the Canadian Cordillera has subdivided the Slide Mountain Terrane into a structurally lower metasedimentary package and an overlying igneous suite composed of metavolcanic and plutonic rocks. In the Finlayson Block, units belonging to the igneous suite are thrust northeasterly over the metasedimentary package and southwesterly over rocks of the Yukon-Tanana Terrane. A radiolarian from an argillaceous metachert belonging to the metasedimentary package was determined to have a Mississippian-Permian age (Plint and Gordon, 1997).



Thrust fault

Steep fault

Yukon–Tanana Terrane

Slide Mountain Terrane

Stikinia and other Terranes

North American Miogeoclinal Strata

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

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FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TECTONIC SETTING

ICE PROPERTY

0 100 200 300 400

KILOMETRES

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FILE: C:\FP\ICE\ACAD3\IC-TANA.DWG	DATE: May 11, 1998

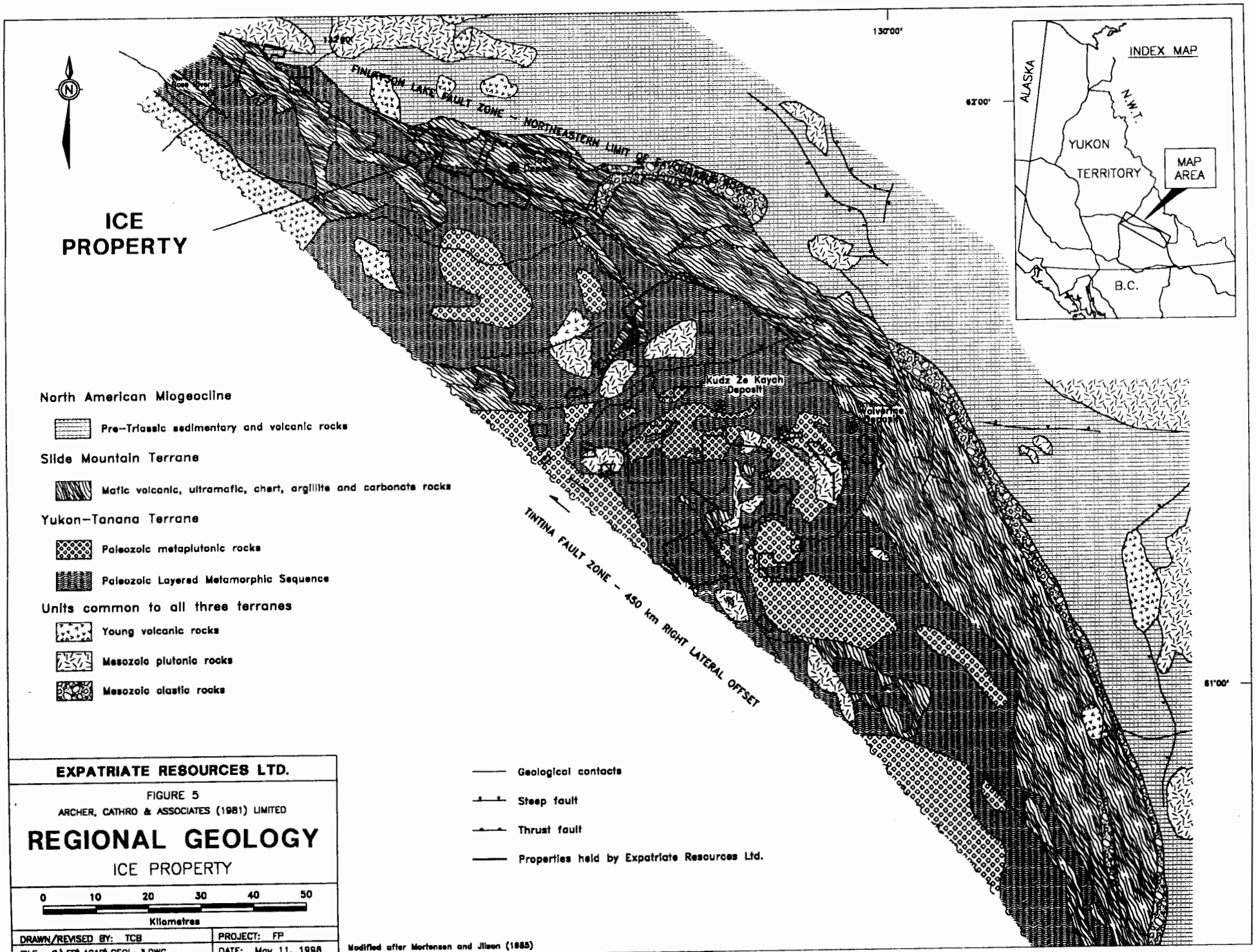

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FIGURE 5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

REGIONAL GEOLOGY

ICE PROPERTY

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FILE: C:\FP\ACAD\GEOL-3.DWG	DATE: May 11, 1998

The Yukon-Tanana Terrane is comprised largely of Paleozoic continental margin and/or arc stratigraphy deposited on a continental basement of uncertain origin (Mortensen, 1992). The Yukon-Tanana Terrane in the Finlayson Block contains three major units collectively referred to as the Layered Metamorphic Sequence. The lower unit consists of garnet-mica schist with interbedded marble, calc-silicate and calcareous schist near the top. The middle unit is comprised of carbonaceous quartzite, schist and phyllite with rare conglomerate and locally extensive felsic and mafic volcanic interbands. The upper unit consists of marble and quartzite. Radiometric dating of felsic metavolcanics in the middle unit has consistently resulted in Late Devonian to Mississippian crystallization ages (Mortensen, 1992). The upper unit is dated with fossils as Early Pennsylvanian to Early Permian (Tempelman-Kluit, 1979).

Although the two terranes were not accreted to North America until Jurassic time, cobbles from both units are present in Late Triassic immature sediments unconformably overlying Slide Mountain and North American stratigraphy.

Intrusive activity within the Finlayson Block includes: relatively undeformed Devonian to Permian mafic dykes and plugs within the Slide Mountain Terrane; sheet-like Devonian to Mississippian intermediate to felsic gneiss and foliated granitic rocks; relatively unfoliated Early Jurassic mafic to intermediate plutons; and, unfoliated Late Cretaceous two-mica granite stocks and dykes, all of which are found within the Yukon-Tanana Terrane. Isolated patches of Late Cretaceous to Tertiary felsic volcanic flows and pyroclastic rocks cap both the Slide Mountain and Yukon-Tanana Terranes.

REGIONAL MINERALIZATION

The discovery of the Kudz Ze Kayah and Wolverine Deposits within the Finlayson Block has attracted VMS exploration activity to the area. Both are Kuroko-type deposits associated with felsic metavolcanic rocks occurring within the middle unit of the Yukon-Tanana Terrane. The Yukon Minfile (DIAND, 1995) describes twenty-one known or suspected VMS occurrences in Yukon-Tanana rocks within the Finlayson Block. Although most of the occurrences are thought to be Kuroko-type, the Fyre Lake Deposit and a few others are most likely Besshi-type (Morin, 1981; Johnston and Mortensen, 1994). Until Cyprus-type mineralization was discovered at the Ice Deposit, only one minor VMS occurrence had been reported in the Slide Mountain Terrane. Kudz Ze Kayah, Wolverine and Fyre Lake Deposits are briefly described in the following paragraphs so that their geological settings can be compared to the Ice Deposit.

The Kudz Ze Kayah (ABM) Deposit lies near the centre of the Finlayson Block (Cominco Exploration, 1995; Whiteway, 1995). It is hosted by an overturned assemblage of felsic pyroclastic, aphanitic massive rhyolite and metasiliciclastic 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 immediate 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 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, Sable 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 and Sable Zones are 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 most recent geological inventory is reported to be 6,237,000 tonnes grading 12.66% zinc, 1.33% copper, 1.55% lead, 370.9 g/t silver and 1.76 g/t gold (Westmin News Release, January 16, 1998). 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 50 m up-section from the massive sulphide horizon. Interpretation of electromagnetic results is complicated by the presence of graphite within the argillite.

The Fyre Lake Deposit is located near the Tintina Fault Zone in the southwestern part of the Finlayson Block. It is a Besshi-type VMS deposit hosted by chlorite±actinolite±quartz schist assigned to the middle unit of the Layered Metamorphic Sequence. The host stratigraphy is structurally overlain by phyllitic metasediments with a basal unit of quartz-chlorite-mica schist (Roberts, 1997). Drilling in 1996 traced a 70 to 80 m thick section containing three horizons comprised of massive to semi-massive pyrite, chalcopyrite and magnetite over a length of 1000 m and width of 100 m. Intersections on the Lower Horizon averaged 1.2% copper, 0.12% cobalt and 0.77 g/t gold across 7 m while those on the Upper Horizon averaged 1.9% copper, 0.12% cobalt and 0.53 g/t gold across 13 m (Columbia Gold News Release, December 2, 1996). The Middle Horizon is discontinuous and no averages have been reported for it. Drilling in 1997 continued to produce encouraging results but reserve estimates have not been released.

REGIONAL GEOCHEMISTRY AND GEOPHYSICS

Expatriate's interest in the Slide Mountain Terrane rocks hosting the Ice Deposit resulted from a re-evaluation of soil and stream sediment geochemical data produced by a 1973 regional exploration program managed by Archer Cathro (Cathro, 1973). The program collected about 5000 samples from the Finlayson Block at a density of approximately one sample per square kilometre. All samples were analyzed for lead, zinc, copper and molybdenum.

The Ice property lies along the extreme northern edge of the survey area and only a small part of it was covered by a single sample line. Most samples returned background values but one yielded the second highest copper value (2000 ppm) obtained during the entire survey (the highest was from a vegetation kill zone at the Wolverine Deposit). The sample was also weakly anomalous for molybdenum (2 ppm) and zinc (248 ppm). The anomaly was never followed up because the sampler had mapped basalt in the area and this rock type often contains minor amounts of copper.

Published regional geochemical data for the Finlayson Lake map sheet (105G) are limited to reconnaissance scale stream sediment sampling conducted by the GSC (Hornbrook and Friske, 1988). The sampling was completed at an approximate density of one sample per 10 sq km. Each sample was analyzed for twenty elements including all the common VMS pathfinder elements.

The GSC sample closest to the Ice Deposit was taken from a creek 1000 m to the east. It returned background values for all metals because the surface expression of the deposit drains into

a small southwesterly-trending gully that is dry for most of the summer and was not sampled by the GSC. The exact location of the copper-rich 1973 Archer Cathro sample is unknown but its plotted location approximately coincides with the gully.

Published regional airborne magnetic surveys for the Finlayson Lake map sheet show a broad magnetic high, trending westerly for the length of the Ice property (DMTS, 1961). This magnetic signature corresponds closely to the areal distribution of the basaltic greenstones and ultramafic rocks belonging to the Slide Mountain Terrane.

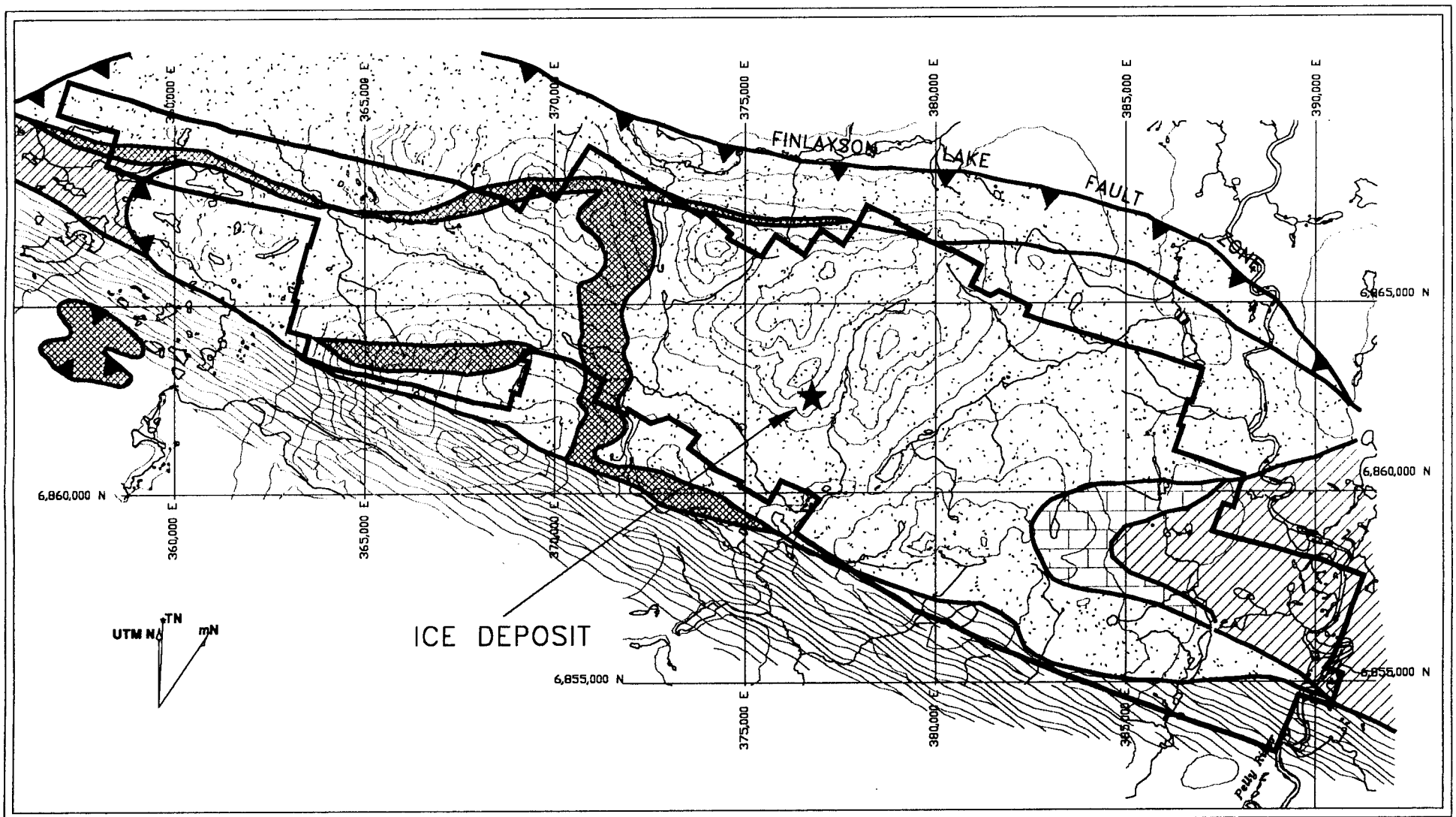
PROPERTY GEOLOGY

General

In 1997 Expatriate performed reconnaissance mapping and prospecting across the entire property and detailed mapping in the immediate vicinity of the Ice Deposit. Property geology (Figure 6) was compiled from this mapping plus unpublished 1:50,000 scale data (Mortensen 1996, personal communication). It is summarized in the following paragraphs and described in more detail in a separate report (Becker, 1997).

The property lies 1 to 3 km south of the Finlayson Lake Fault Zone which marks the contact between allochthonous Slide Mountain Terrane rocks and autochthonous North American miogeoclinal strata (Mortensen and Jilson, 1985; Plint and Gordon, 1997). The southern property boundary approximately coincides with the contact between the Yukon-Tanana and Slide Mountain Terranes.

Slide Mountain Terrane units underlying the property consist of variably strained, intercalated, basalts, ultramafic and mafic plutonic rocks, ribbon cherts with associated argillite and sandstone, and minor limestone. Metamorphic grade ranges from sub-greenschist to greenschist facies. Whole rock geochemistry and depositional environments are consistent with a deep submarine basin in either a marginal or ocean basin setting (Plint and Gordon, 1997). Depositional ages are inferred to be Devonian to Triassic based on lithologic similarities to other rock types in the region (Mortensen, 1992). Two samples collected from Slide Mountain Terrane rocks slightly south and east of the Ice property yielded late Paleozoic (Mississippian-Permian) fossil ages (Plint and Gordon, 1997).



Claim margin

Thrust fault

YUKON–TANANA TERRANE

Interlayered metavolcanics and metasediments

SLIDE MOUNTAIN TERRANE

Basalt with interlayered chert

Chert with minor basalt

Serpentinized ultramafic

Massive marble

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FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GENERAL PROPERTY GEOLOGY

ICE PROPERTY

0 1500 3000 4500 6000 7500 m

DRAWN/REVISED BY: LCP\TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-PRGEO.DWG	DATE: Feb 24, 1998

Geology in the Drill Area

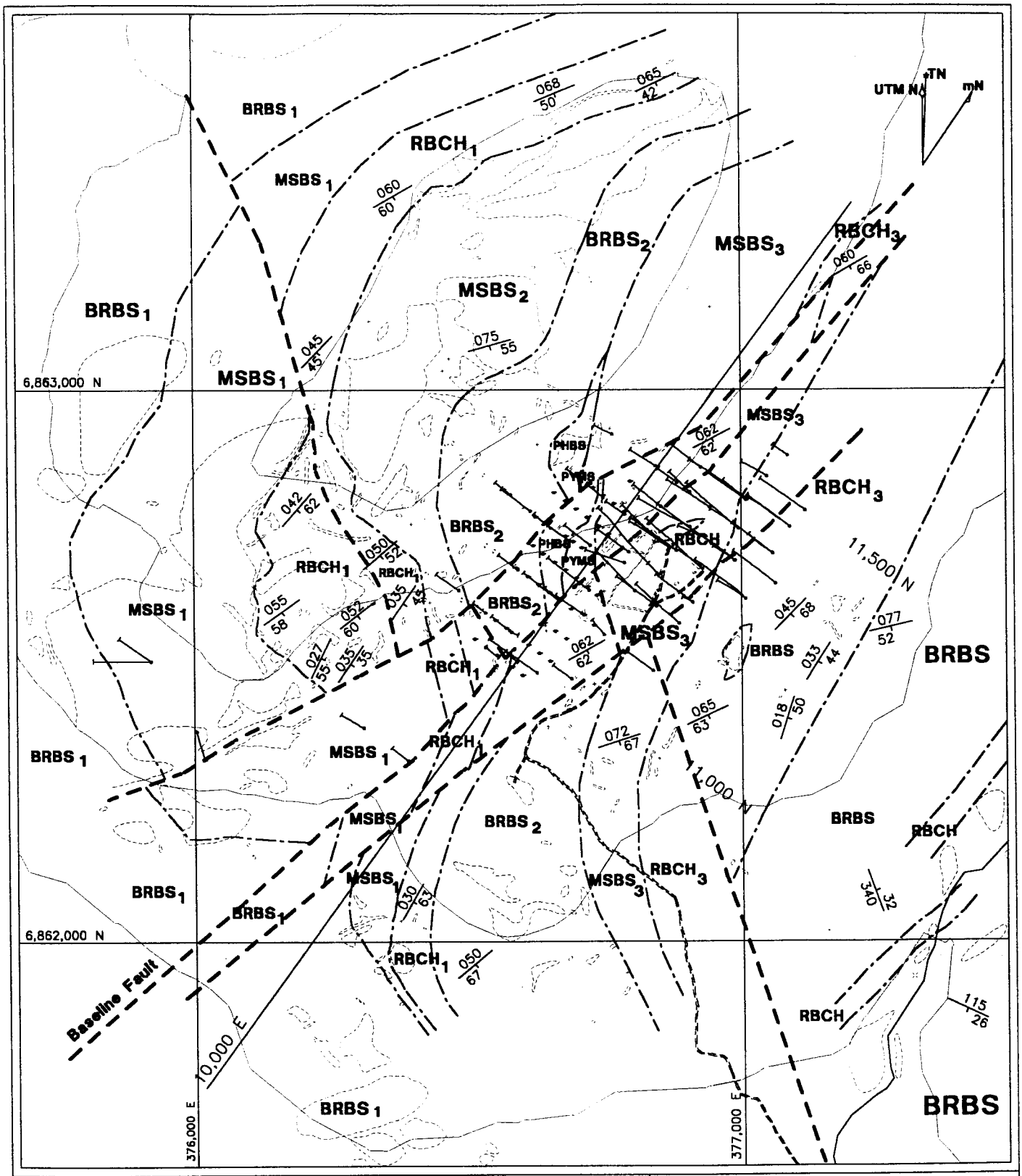
Geology in the drill area (Figure 7) was compiled at a scale of 1:2,500 and is based on mapping of outcrops and drill access roads, logging of diamond drill holes and interpretation of ground magnetometer and electromagnetic response. The area is underlain by relatively unstrained, massive or autobrecciated basalts with interbedded argillaceous ribbon cherts. Units generally strike northeast and dip moderately to the southeast. Several steeply-dipping faults have been identified. They exhibit variable strike orientations but displacements are minimal. The following section is based primarily on mapping by L.C. Pigage as described in a company memo (Pigage, 1997).

Lithology

Volcanic rocks in the drill area consist of massive basalts (MSBS), porphyritic pillow basalts (PHBS) and autobrecciated pillow basalts (BRBS). Interbedded with the basalts are black, grey, green and red ribbon cherts (RBCH), massive green and red cherts (MSCH), greywackes (SDST) and carbonaceous mudstones (CBMS). Figure 8 illustrates a stratigraphic column for the drill area showing the relative positions of the following units.

Basal Breccia Basalt ($BRBS_1$) and Basal Mudstone Conglomerate (MSCG)

The lowermost unit in the drill area is brecciated aphanitic pillow basalt which is at least 110 m thick. The rock is characteristically medium green with a pale pink to purple tinge. It is generally nonmagnetic and noncalcareous to slightly calcareous. Pillows ranging up to 1.5 m in diameter are commonly observed in outcrops but are not readily visible in drill core. Red and



MSBS	Massive basalt	— — —	Fault
BRBS	Breccia basalt	———	Geological contact
PHBS	Porphyritic basalt		Outcrop boundary
RBCH	Ribbon chert		Cat road
PYMS	Massive sulphides	050/56	Bedding with strike and dip
	Diamond drill hole		

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FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

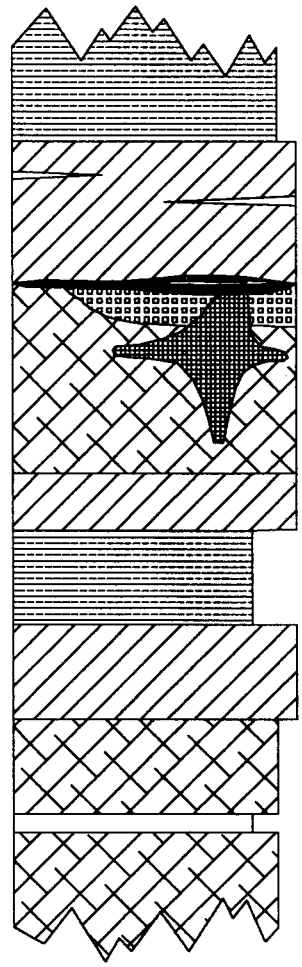
DETAILED GEOLOGY DRILL AREA

ICE PROPERTY

0 100 200 300 400 500m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-DE-GI.DWG	DATE: May 11, 1998

Thickness		
>150 m	$RBCH_3$	upper mudstone and chert
50 – 85 m	$MSBS_3$	hanging wall massive basalt with chert bands
0 – 18 m	PHBS	porphyritic basalt
65 – 90 m	$BRBS_2$	footwall breccia basalt
30 – 40 m	$MSBS_2$	footwall massive basalt
50 – 70 m	$RBCH_1$	lower mudstone and chert
75 – 90 m	$MSBS_1$	basal massive basalt
	$BRBS_1$	basal breccia basalt
>110 m	MSCG	basal mudstone conglomerate
	$BRBS_1$	basal breccia basalt



Massive sulphide mineralization

Stringer sulphide mineralization

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FIGURE 8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

STRATIGRAPHIC COLUMN DRILL AREA

ICE PROPERTY

0 40 80 120 160 200m

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FILE: C:\FP\ICE\ACAD3\IC-STRA1.DWG	DATE: May 11, 1988

green chert forms interstitial aggregates between some pillows. Outcrops often exhibit autobrecciated textures and radial fractures within the pillows.

In core this basalt is fragmental with a dark green chloritic matrix surrounding subrounded to subangular clasts up to 10 cm in diameter. The chlorite matrix usually constitutes 5 to 15% of the unit. Locally it contains abundant lime green epidote. In many instances the clasts show concentric reddish-brown rims caused by fine disseminated hematite.

A 10 to 15 m thick interband of dark grey, carbonaceous mudstone conglomerate (MSCG) lies about 50 m below the upper contact. The conglomerate consists of unsorted clasts of chert, altered basalt and sandstone in a fine grained mudstone matrix. Although clasts range up to 5 cm across, most are sand size fragments. The matrix constitutes about 50% of the horizon and exhibits a moderate slaty cleavage.

Basal Massive Basalt ($MSBS_1$)

$BRBS_1$ is conformably overlain by medium green, medium to coarse grained, equigranular massive basalt ($MSBS_1$) which ranges between 70 and 90 m in thickness. The basalt forms rounded brown outcrops with a distinct salt and pepper appearance due to the large grain size. Flows and pillows are not readily apparent in either core or outcrop. Primary mineralogy is often partly or completely altered to chlorite and epidote.

Lower Mudstone and Ribbon Chert ($RBCH_1$)

Conformably overlying $MSBS_1$ is a 50 to 70 m thick sequence of interbedded carbonaceous mudstones and ribbon cherts. The dominant rock type consists of soft, noncalcareous, dark grey

to dull sooty black mudstone. Locally the mudstone contains thin interbeds of medium grey, finely laminated calcareous siltstone or dull brown argillaceous siltstone. The siltstones occasionally exhibit graded bedding and small load cast structures. The mudstones break along bedding and poorly developed slaty cleavage which is marked by a micaceous sheen on fresh surfaces. They are typically coated with a patchy medium brown limonite on weathered surfaces.

Intercalated with the mudstones are ribbon cherts exhibiting a wide range of colours including medium grey to black, green and red to maroon. Sequences of ribbon chert range from metres to tens of metres in thickness and are composed of individual bands that are typically 1 to 3 cm thick. The chert beds often contain spaced tension gashes that are oriented perpendicular to the bedding and infilled with white quartz.

Ribbon cherts weather to form resistant ridges while the carbonaceous mudstone is recessive. In outcrop the lowermost portion of the $RBCH_1$ is marked by approximately 15 m of red and green ribbon cherts but in drill holes these rocks are invariably light to dark grey.

Footwall Massive Basalt ($MSBS_2$)

$RBCH_1$ is conformably overlain by 30 to 40 m of homogeneous, medium grained equigranular massive basalt ($MSBS_2$). This unit is compositionally and texturally similar to the basal massive basalt ($MSBS_1$) but is not as coarsely crystalline. In outcrop $MSBS_2$ forms rounded outcrops with a fine grainy texture. The rock is normally dark green but immediately above $RBCH_1$ it is altered to pale greenish grey. A thin section examination conducted by Vancouver Petrographics Ltd. observed that the alteration consists of dolomite with lesser muscovite (Shearer, 1997).

Footwall Breccia Basalt ($BRBS_2$)

Footwall breccia basalt ($BRBS_2$) is 65 to 90 m thick and is lithologically very similar to $BRBS_1$. It consists of 60 to 95% rounded to angular, aphanitic basalt fragments in a dark green chloritic matrix. The fragments range from olive to bluish green and have a faint purplish or pinkish tinge when dry. Commonly the fragments feature an up to 1 cm thick concentric outer rim that is lighter coloured due to alteration or maroon because of finely disseminated hematite. The altered rims locally contain abundant tiny, light grey to cream spherules of unknown composition.

The chloritic matrix is characteristically fine grained. In some instances it contains lime green epidote, red hematite or quartz as well as chlorite. Where the matrix is hematite-rich it is a dark maroon to bright red.

Unit $BRBS_2$ weathers to form nondescript brown outcrops that exhibit a mixture of resistant fragments including angular green or red chert. Rounded to tubular pillows are found locally while individual beds about 1 m thick can be distinguished in outcrops along the ridge top northwest of the drill area.

The contact between the footwall breccia basalt ($BRBS_2$) and the footwall massive basalt ($MSBS_2$) is gradational with interbanding on a scale of metres to a few tens of metres.

Stringer sulphide mineralization is common within $BRBS_2$ and in a few areas a massive sulphide horizon (PYMS) lies between $BRBS_2$ and overlying $MSBS_3$. Mineralization and alteration are described in the Diamond Drilling section.

Porphyritic Basalt (PHBS)

An aphanitic, medium green to dark grey-green, noncalcareous porphyritic basalt (PHBS) usually overlies $BRBS_2$. Phenocrysts up to 5 mm across constitute about 15% of the porphyritic unit. They consist of equant to tabular, randomly oriented, white to bright green plagioclase grains or clusters that are partially or completely altered to a fine grained mixture of chlorite, muscovite, calcite and saussurite. Primary plagioclase composition in one sample is approximately An_{45}.

The PHBS unit weathers to form rounded, medium brown outcrops. Phenocrysts are readily visible as grey to green randomly oriented grains on weathered surface. Outcrops locally display pillow textures. In core about 90% of the porphyritic basalt is fragmental displaying basalt clasts up to 10 cm in diameter within a dark green chloritic matrix. Locally the matrix and clasts are dark maroon because of abundant finely disseminated hematite.

Marginal contacts with the overlying and underlying basaltic units are sharp and no interbanding has been observed between the porphyritic basalt and other units. PHBS appears to have a limited lateral extent and its thickness ranges from 0 to 18 m. The massive sulphide horizon (PYMS) normally occurs between PHBS and overlying $MSBS_3$. Stockwork sulphides are locally developed within PHBS.

Hanging Wall Massive Basalt ($MSBS_3$)

Overlying PHBS, PYMS, or $BRBS_2$ is a medium grained, medium to dark green, equigranular, homogeneous massive basalt ($MSBS_3$) which resembles the massive basalt units $MSBS_1$ and $MSBS_2$. This unit is 50 to 85 m thick. It weathers to rounded outcrops with a grainy texture. Pillows have not been recognized within this unit. Epidote occurs locally as an alteration replacement of the primary plagioclase giving the unit a lime green tinge.

Massive grey, red, or green cherts occur as thin local interbeds within $MSBS_3$. The chert interbeds have variable thicknesses ranging up to a maximum of 2 m. Surface geologic mapping indicates they may be continuous laterally for a distance of 50 m or more. Locally bright red, siliceous, hematitic mudstone also forms thin interbeds within the basal part of the unit. The hematitic mudstone is not siliceous enough to be logged as a chert. $MSBS_3$ commonly displays fine grained chill margins at contacts with chert and hematitic mudstone interbeds.

Upper Mudstone and Chert ($RBCH_3$)

The youngest stratigraphic unit in the drill area consists of poorly exposed, dark grey to black carbonaceous mudstone with lesser pale grey, black or pale green ribbon chert interbeds ($RBCH_3$). This unit is at least 150 m thick and is lithologically similar to $RBCH_1$.

Ribbon chert intervals are up to 5 m thick and are composed of individual beds up to 3 cm thick. In outcrop the ribbon chert intervals are invariably light to dark grey but in core many are pale green. Green chert beds are separated by silvery cream, muscovite-rich phyllite partings while dark grey chert features carbonaceous partings.

$RBCH_3$ also contains numerous coarse grained, medium to dark grey, slightly calcareous, massive greywacke interbeds. These beds are typically homogeneous but occasionally exhibit graded bedding and load cast structures. One greywacke bed intersected in core was more than 10 m thick and contains internal interbeds of chert and mudstone. The greywacke is recessive and does not outcrop in the drill area.

At least one lens of breccia basalt (BRBS) occurs in $RBCH_3$. This lens grades into green ribbon chert along strike.

Metamorphism

Relic primary mineralogy in the basalts consists dominantly of plagioclase laths with interstitial clinopyroxene. This primary mineralogy is partially or completely altered to fine grained metamorphic assemblages consisting of clinozoisite, epidote, chlorite, sericite, quartz and actinolite. Coexisting mineral assemblages indicate metamorphic grade reached a maximum of upper greenschist facies.

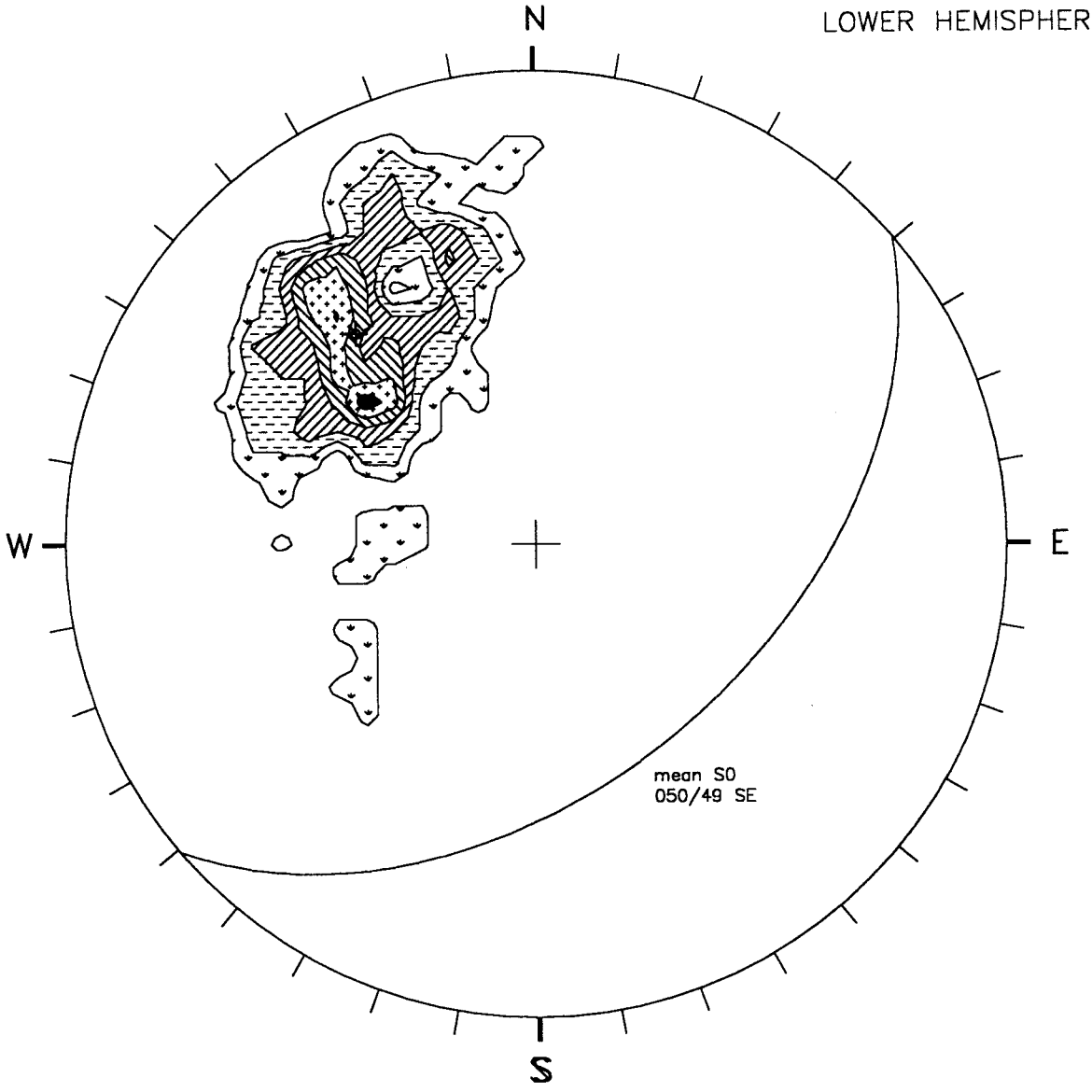
Structure

Rocks in the drill area are cut by three steep northeast-trending faults which offset an older structure with a north-northwesterly strike and near vertical dip (Figure 7). Stratigraphic units dip moderately to the southeast except in a narrow bed paralleling the Baseline Fault where they are interpreted as relatively flat lying based on drill sections. This systematic change in bedding orientation suggests that the Baseline Fault bisects the hinge of a macro-kink band structure.

Figure 9 contains a contoured equal area stereonet of eighty-two S0 depositional bedding measurements from outcrops in the drill area. The stereonet shows a clustering of southeast-dipping beds with a mean bedding orientation of 050/49 SE. The greatest concentration of S0 bedding measurements is at 040/38 SE.

Argillaceous units in the drill area contain poorly developed slaty cleavage which strikes northeast and dips steeply to the southeast. Chert units exhibit poorly developed fracture cleavage. Typically chert and siltstone horizons within mudstones are boudinaged and contain tension gashes filled with quartz. These tension gashes are oriented perpendicular to bedding. Cleavage-bedding intersections consistently indicate the units are structurally upright with the anticlinal hinge located northwest of the drill area.

EQUAL AREA
LOWER HEMISPHERE



CONTOUR PLOT

SCHMIDT POLE
CONCENTRATIONS
% of total per
1.0 % area

Minimum Contour	=	2
Contour Interval	=	2
Max.Concentration	=	13.4

82 Poles Plotted

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FIGURE 9

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PRIMARY BEDDING DRILL AREA

ICE PROPERTY

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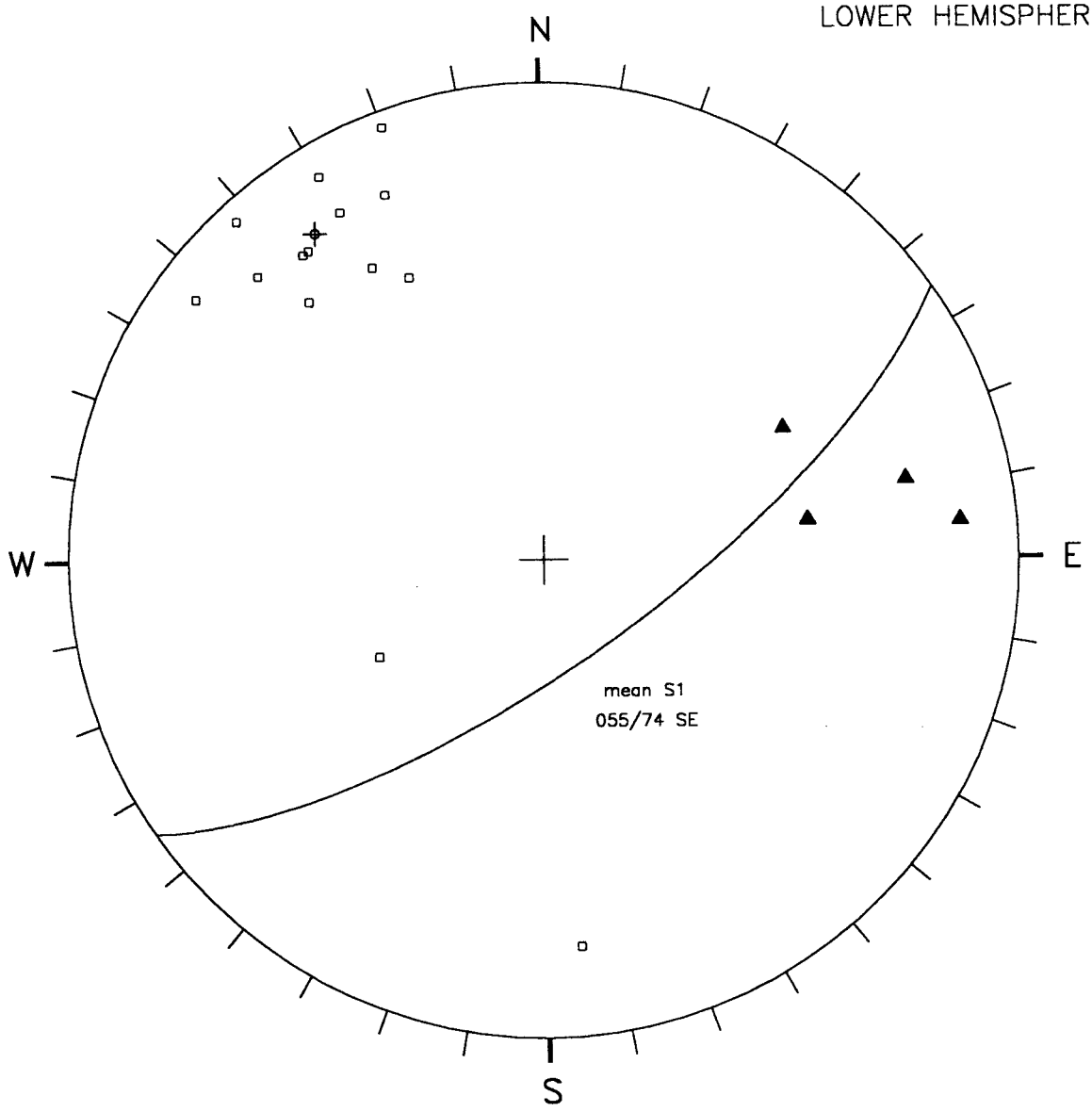
FILE: C:\FP\ICE\ACAD3\IC-S0.DWG	DATE: May 11, 1998

The mean S1 slaty cleavage orientation from fourteen measurements (Figure 10) is 055/74 SE. L1 lineation measurements plunge gently to the east.

Stratigraphic continuity in the drill area is disrupted by four steep faults. It is uncertain whether the faults are dominantly strike-slip or dip-slip. Correlation of units across the faults suggest actual displacements are small (tens of metres to a few hundred metres). Crosscutting and stratigraphic relations indicate that the north-northwest trending fault is the oldest feature. Units $MSBS_2$ and PHBS are not present on the west side of this fault suggesting that it may have been active during volcanism and may have controlled deposition of some units. However, the absence of absolutely diagnostic marker horizons and the cyclical nature of sedimentation and volcanism mean that offset along the fault could be much larger than is shown and the absence of the two units could also be explained by incorrect unit correlations. Regardless of which interpretation is correct, this fault is an important feature because only groundwater remobilized mineralization has been discovered on its west side. It is possible that this fault was a major syndepositional control for mineralization or that it later bisected and significantly displaced two parts of the system.

The northeast-trending faults are clearly post-mineralization and dip steeply northwest. The most northwesterly fault consists of tectonic breccia with narrow gouge zones. The middle structure (the Baseline Fault) contains thick zones of gouge and tectonic breccia which are locally cemented by rebrecciated calcite veins. The third fault is the narrowest and is marked by gouge zones. Stratigraphic correlation across the northeast-trending faults is best explained by combined left lateral strike-slip and normal dip-slip displacement with the northwest block dropped.

EQUAL AREA
LOWER HEMISPHERE



POLES to S1 CLEAVAGE

MEAN S1 POLE

LINEATION L1

14 Poles Plotted

4 Lineations Plotted

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FIGURE 10

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLEAVAGE AND LINEATION DRILL AREA

ICE PROPERTY

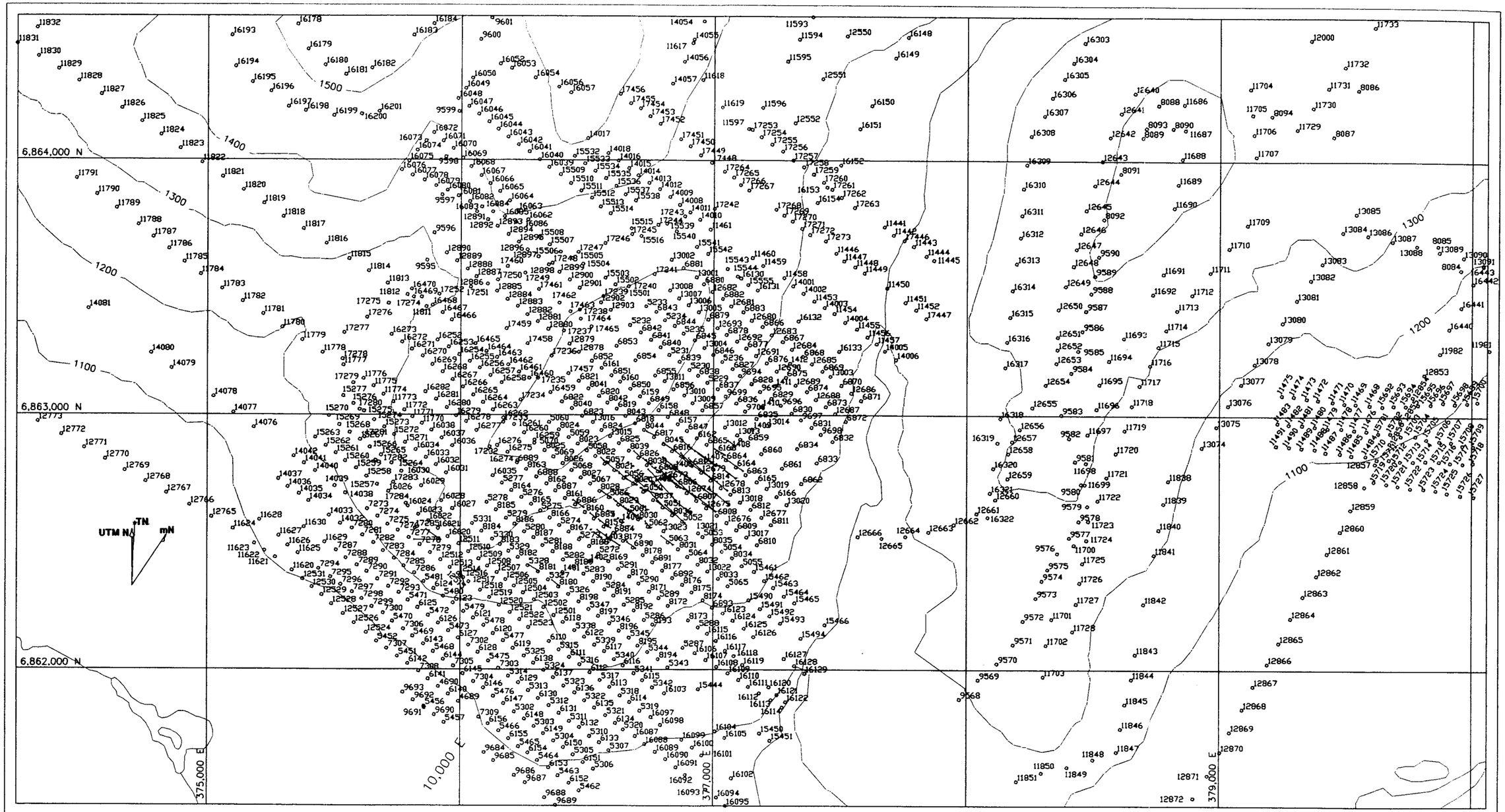
DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S1L1.DWG	DATE: May 11, 1998

PROPERTY GEOCHEMISTRY

In 1996 a 2000 by 1000 m area surrounding the Ice Deposit was grid soil sampled, as previously reported (Eaton and Pigage, 1997). Work in 1997 included reconnaissance sampling along contour and claim lines and extensions of the 1996 grid to the west and east. The reconnaissance sampling was done at approximately 100 m intervals except where badly frozen or swampy ground prevented sample collection. Grid sampling was done at 50 m intervals along lines spaced 100 m apart.

Soil samples were collected from B or B+C Horizon material. The samples were placed in pre-numbered kraft bags and sent to Chemex Labs Ltd. in North Vancouver, B.C. where they were sieved to -80 mesh, digested in nitric-aqua regia and geochemically analyzed for 32 elements using the Induced Coupled Plasma (ICP) technique. Sample locations are marked with 0.5 m wooden lath bearing aluminum tags inscribed with the grid coordinates and sample number. Corrected GPS data was used to plot reconnaissance sample locations while cut baselines were used for grid sampling control. Sample locations in the drill area are shown on Figure 11.

Copper, zinc and cobalt geochemical values for the drill area are illustrated in Figures 12 to 14, respectively. The main anomaly is an area of moderate to extreme copper response that is 1400 m long and up to 500 m wide. It extends from the zone of surface mineralization 1000 m down a gully to the southwest and 200 m up a moderately steep slope to the northwest. The southwesterly extension can be explained by hydromorphic transport in groundwater while the



12765 Sample location with sample number

Diamond drill hole

EXPATRIATE RESOURCES LTD.

FIGURE 11

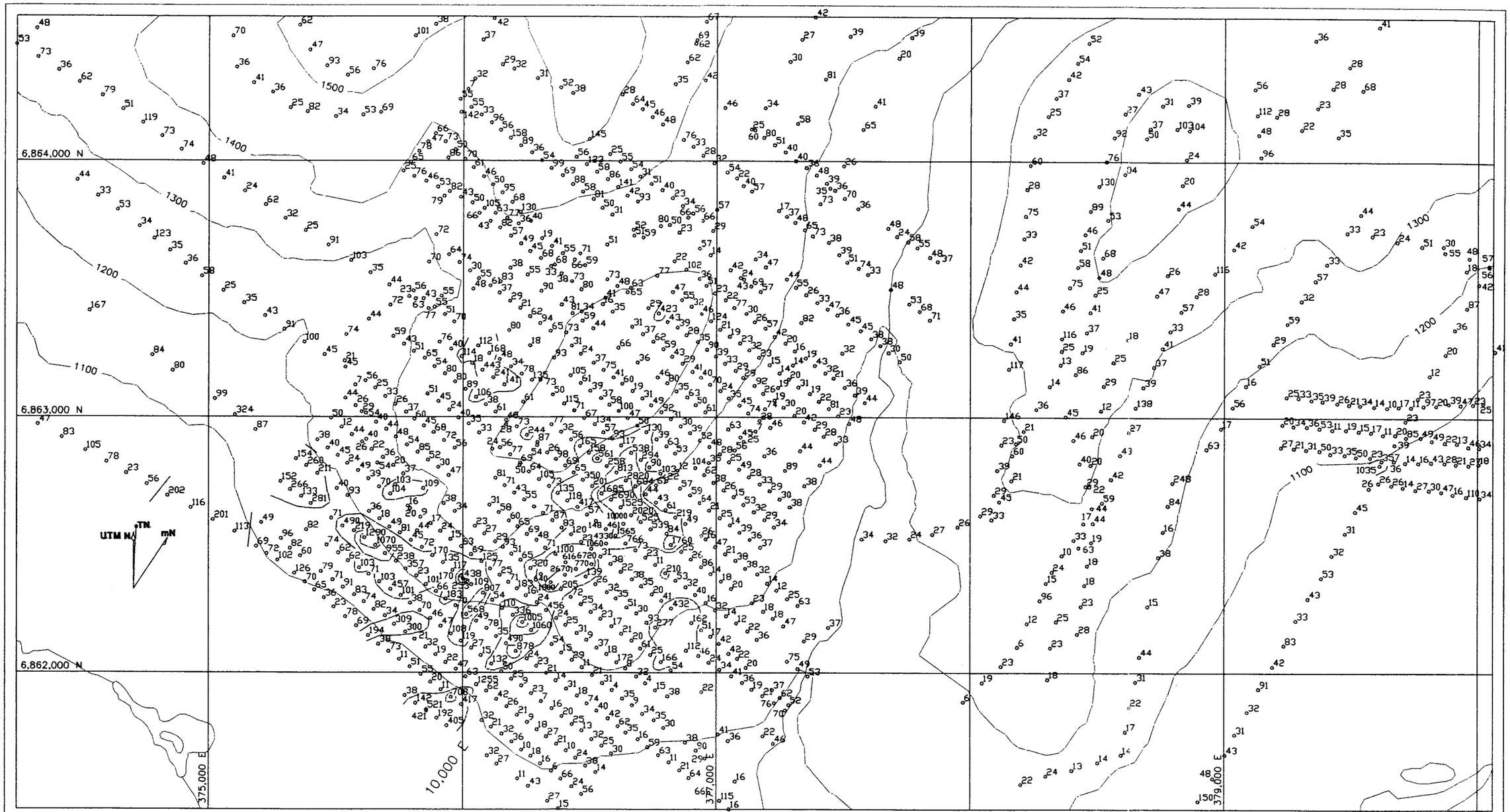
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SAMPLE LOCATION DRILL AREA

ICE PROPERTY

0 100 500 1000 m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-DE-SM.DWG	DATE: May 12, 1998



38 Sample location with copper value in ppm

≥ 1000 ppm Cu

≥ 500 < 1000 ppm Cu

≥ 100 < 500 ppm Cu

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FIGURE 12

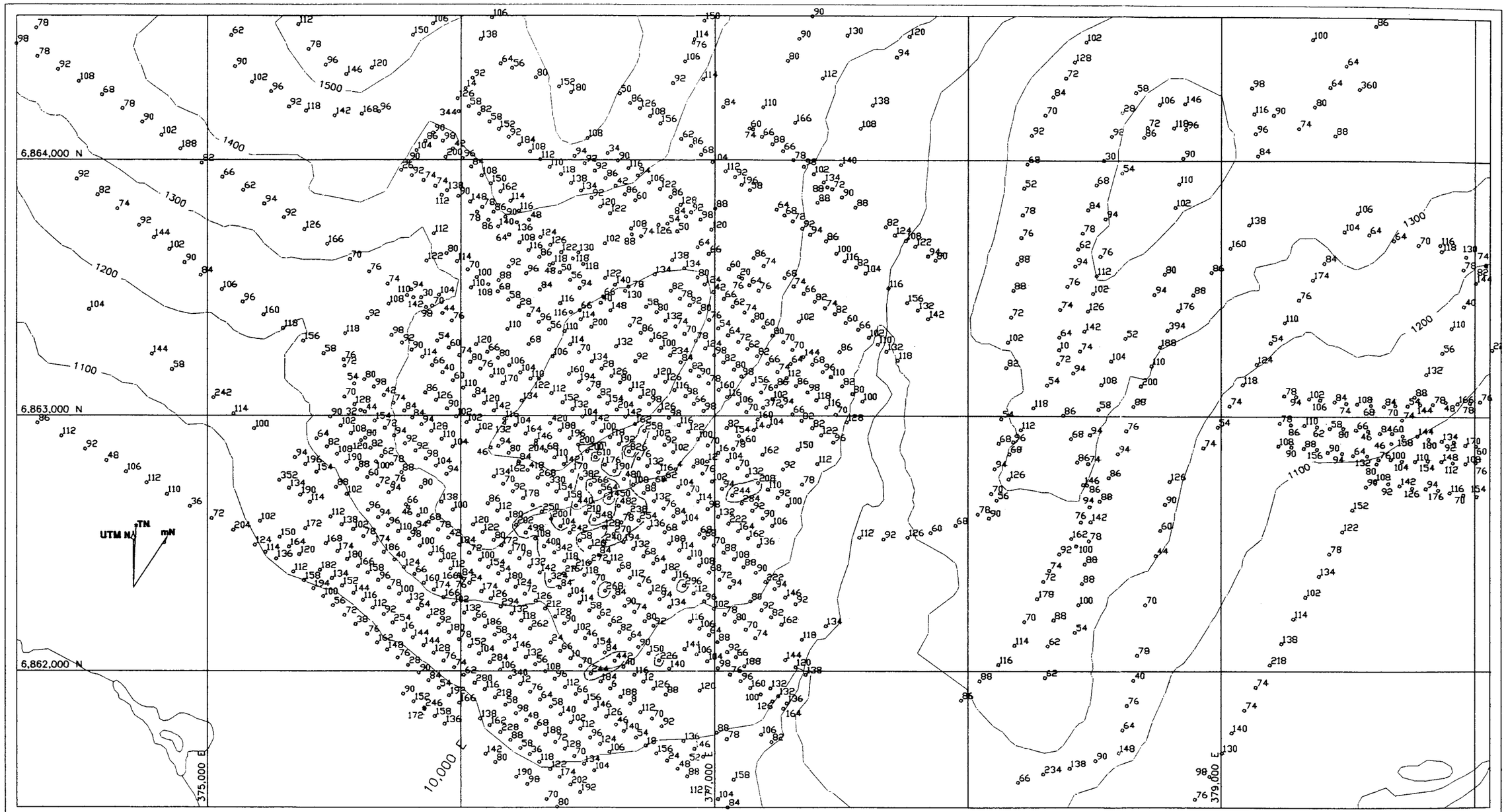
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

COPPER GEOCHEMISTRY DRILL AREA

ICE PROPERTY

0 100 500 1000 m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-GE-SHLOWG	DATE: May 12, 1988



38 Sample location with zinc value in ppm

≥ 1000 ppm Zn

≥ 500 < 1000 ppm Zn

≥ 200 < 500 ppm Zn

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FIGURE 13

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

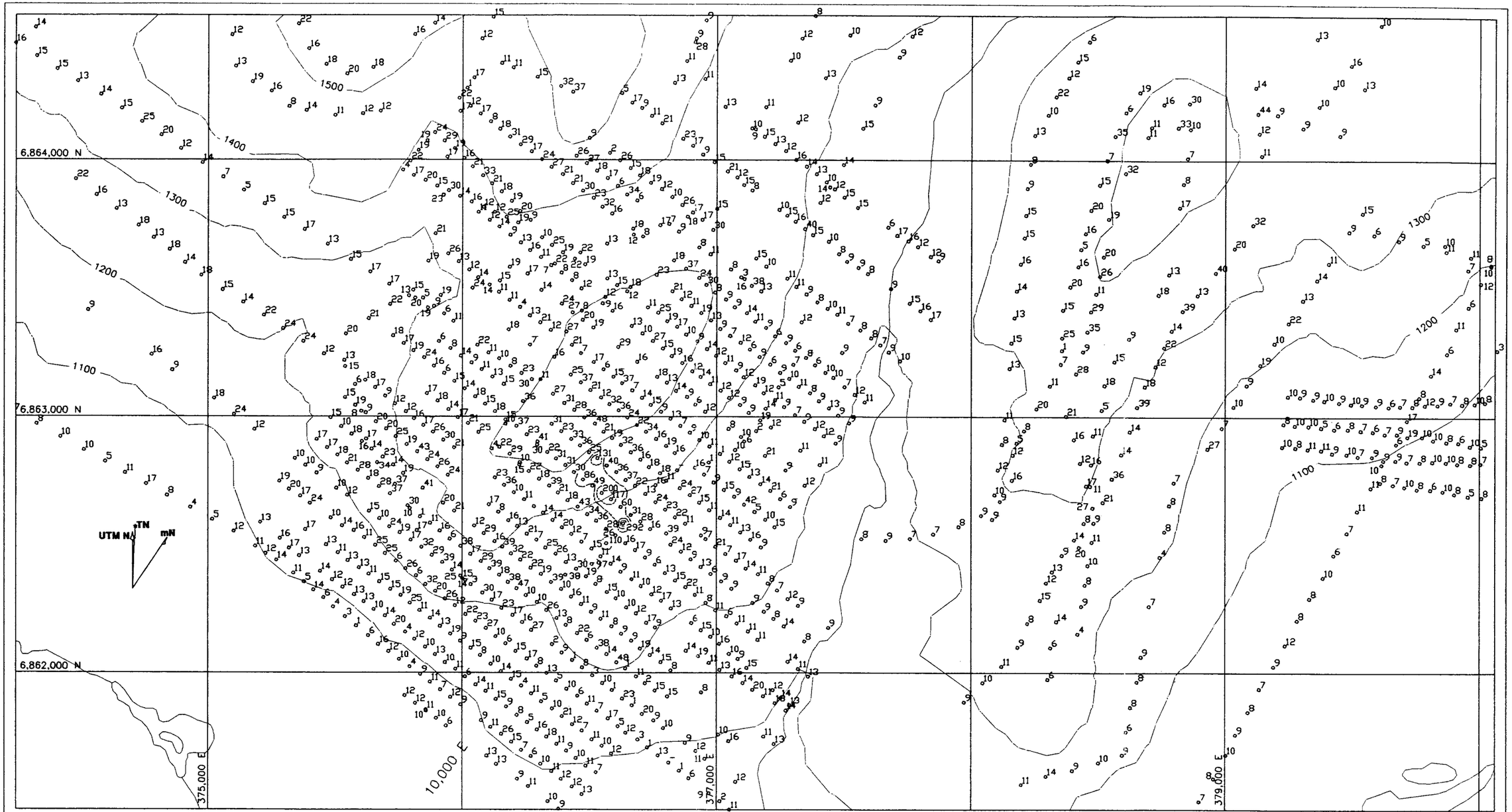
ZINC GEOCHEMISTRY DRILL AREA

ICE PROPERTY

0 100 500 1000 m

DRAWN/REVISED BY: TCB | PROJECT: FP

FILE: C:\FP\ICE\ACAD\ICE-GE-SN.DWG | DATE: May 12, 1998



38 Sample location with cobalt value in ppm

≥ 200 ppm Co

≥ 100 < 200 ppm Co

≥ 20 < 100 ppm Co

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FIGURE 14

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

COBALT GEOCHEMISTRY DRILL AREA

ICE PROPERTY

0 100 500 1000 m

DRAWN/REVISED BY: TCB | PROJECT: FP

FILE: C:\FP\ICE\ACAD3\IC-DE-SM.DWG | DATE: May 12, 1988

northwesterly extension is probably caused by weak stockwork mineralization in the underlying bedrock. The anomaly is truncated to the northeast by cover rocks which cap the mineralization. Anomalous zinc and cobalt response coincide with copper in the vicinity of the known deposit and uphill to the northwest but do not extend down the gully to the southwest. Peak values are >10,000 ppm copper, 1450 ppm zinc and 200 ppm cobalt. Geochemical response for other metals is generally subdued and shows little direct correlation with the main indicator metals or areas of surface mineralization.

A second pronounced geochemical trend lies about 900 m west of the deposit and is aligned perpendicular to the main geochemical target. This trend features moderately to extremely anomalous copper without cobalt or zinc support. It is 1000 m long and still open to the west. The anomalous values parallel topography but crosscut stratigraphy and are probably caused by glacial dispersion from the Ice Deposit.

Two other smaller clusters of anomalous copper values were outlined on the edge of the grid, 600 m to the northwest and 500 m to the southeast of the area of surface mineralization. Both are in heavily vegetated areas and neither has been trenched or drill tested. The southeasterly cluster is particularly interesting because it straddles the projected surface trace of the massive sulphide (PYMS) horizon.

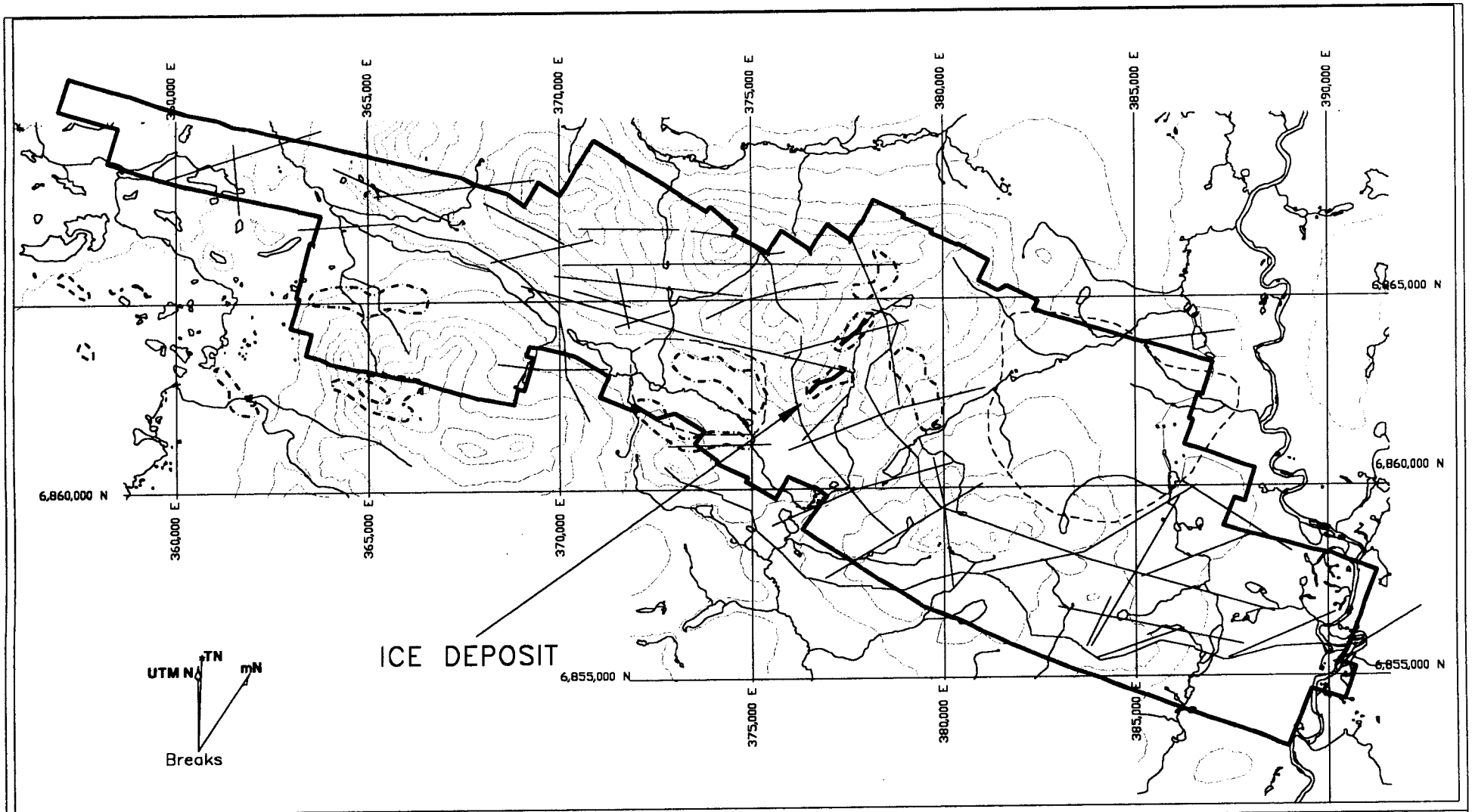
Reconnaissance sampling off the grid returned scattered anomalous copper values in areas underlain by basaltic rocks. These targets have not been thoroughly prospected or soil sampled.

PROPERTY GEOPHYSICS

During the 1996 exploration program total magnetic field and HLEM (Maxmin) ground surveys were conducted over the cut grid while airborne VLF, resistivity and magnetic surveys were conducted over the entire property. Geophysical work performed during the 1997 exploration program included an interpretation of the airborne results and a UTEM ground survey over part of the cut grid.

The 1996 airborne surveys were completed by Dighem (Dighem^{V} Survey, 1997) while the interpretation was performed by VOX Image Ltd. (Robertson, K., 1997). The surveys outlined a moderate resistivity low and a weak VLF conductor directly over the Ice Deposit (Figure 15). Weak, discontinuous anomalies extend from the drill area about 4 km along strike to the north. Similar anomalies are located 1 km to the east, 2 km to the southwest and 12 km to the west. Other resistivity anomalies are along the flank of till-covered valleys and are therefore suspect. The magnetic survey produced considerable relief with areas underlain by basalt or ultramafic rocks characterized by high magnetic field response.

The 1996 magnetic and HLEM ground geophysical surveys were conducted by Amerok Geoscience Ltd. (Lee and Power, 1997). The ground HLEM survey outlined two weak to moderate conductors (Figure 16). The stronger of the two coincides with massive sulphide mineralization near the Baseline Fault. The other conductor parallels the first about 250 m to the east and appears to coincide with the contact between massive basalts and overlying ribbon cherts. The magnetic survey was used to assist geological mapping in the vicinity of the Ice Deposit by outlining areas underlain by basalts.



Magnetic Features

- Breaks
- Highs
- Lows
- Contact

Resistivity Features

- Trends
- Anomalies

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FIGURE 15

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

AIRBORNE GEOPHYSICAL COMPILATION

ICE PROPERTY

0 1500 3000 4500 6000 7500 m

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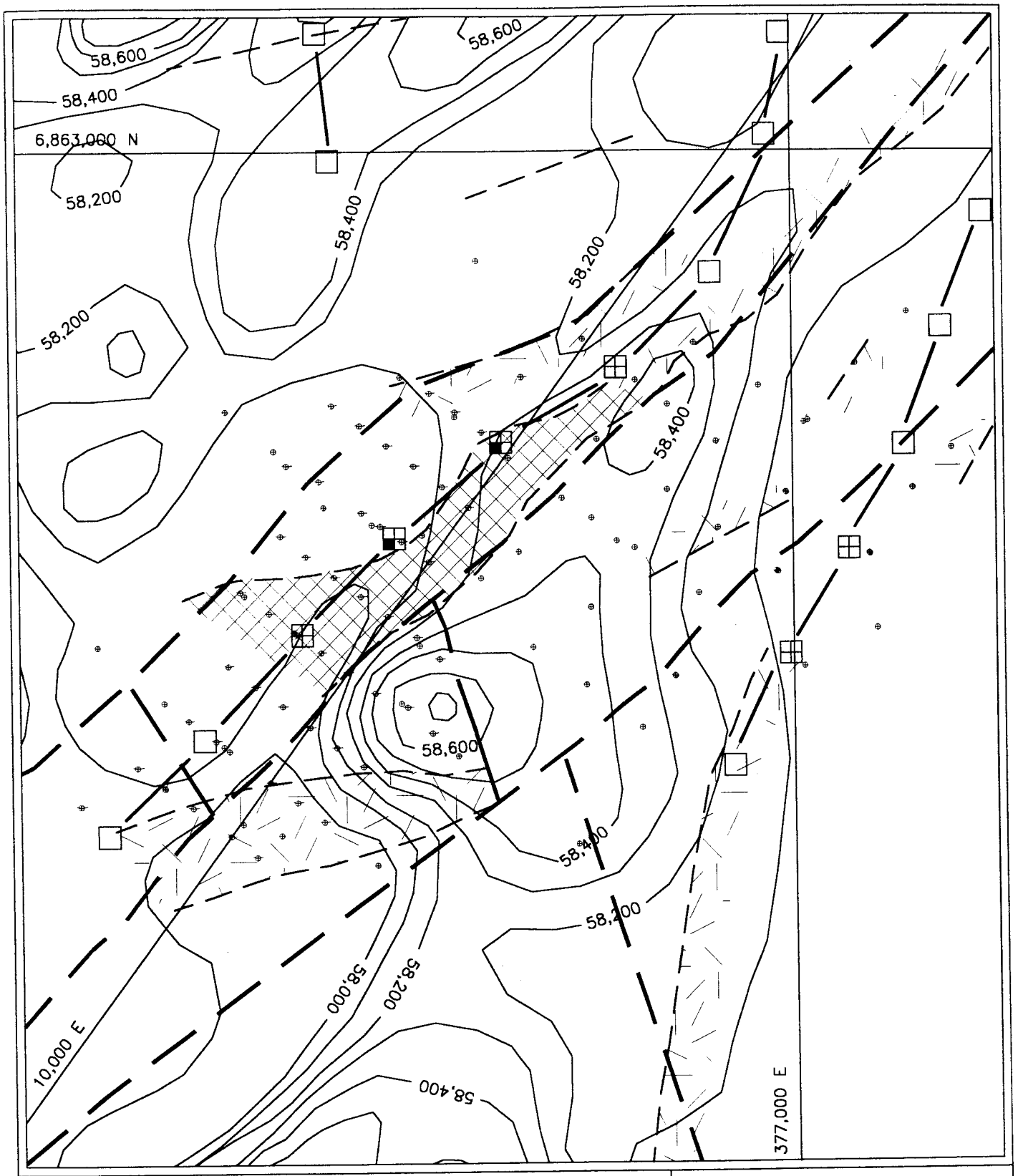
FILE: C:\FP\ICE\ACAD3\IC-GOPH.DWG	DATE: May 11, 1998



Fault

Weak UTM conductor

Very weak UTM conductor

UTM contact

HLEM conductor axis

Total magnetic field contour

Drill hole collar

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FIGURE 16

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GROUND GEOPHYSICAL COMPILATION - DRILL AREA

ICE PROPERTY

0 100 200 300 400 500m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-GEPH.DWG	DATE: May 11, 1998

The UTEM survey was performed by SJ Geophysics Ltd. in association with Lamontagne Geophysics Ltd. and is described in a separate report included as Appendix III. The UTEM survey utilized three different loop configurations with surveying both inside and outside the loops. The results for all UTEM surveys indicates a relatively good conductive zone striking northeast across the grid and roughly paralleling the Baseline Fault and HLEM anomaly. This conductive zone is due to a combination of massive sulphide and the westerly-dipping Baseline Fault. A number of other very weak conductors are located in the survey area as shown on Figure 16.

DIAMOND DRILLING

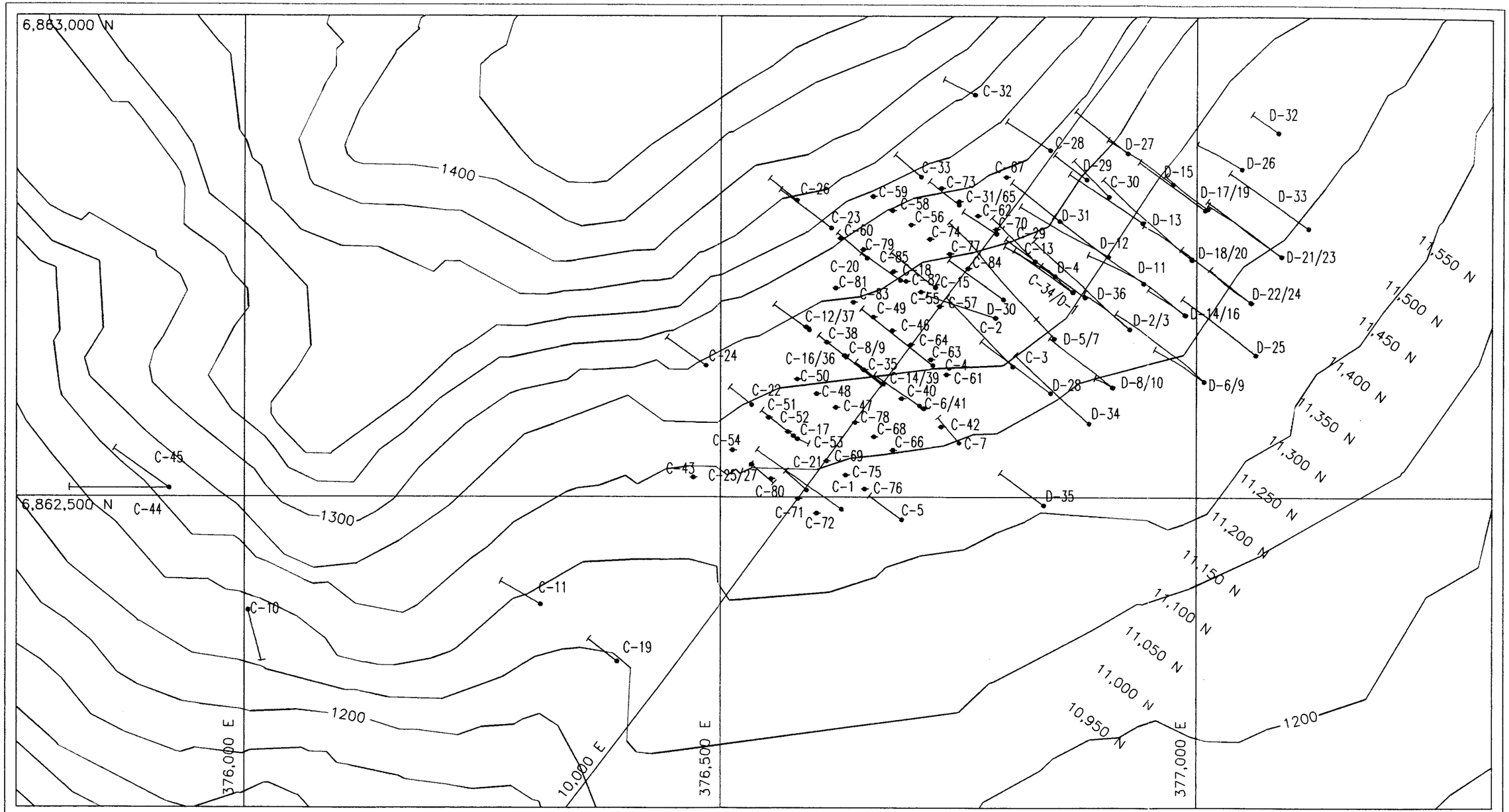
General

Between May and September 1997, a total of 7879.38 m of diamond drilling was done in 87 holes. When combined with the 1996 drilling, a total of 10583.73 m has been completed in 121 holes. Drill hole locations are shown in plan on Figure 17. Vertical cross sections appear on Figures 18 to 29 while level plans are illustrated on Figures 30 to 33. Survey data concerning individual holes are summarized on Tables 1 to 3.

Drilling was contracted to E. Caron Diamond Drilling Ltd. and was done with a Val d'Or and a Longyear 38. Drill site construction and moves were done with a Caterpillar D-6 except for Holes IC97-44 and -45 where sites were made by hand and moves were made by helicopter. The Val D'Or was stored on site from the 1996 program. A BBS-15 that was also stored on site over the winter was replaced with the Longyear 38 in May.

Water for the drills and camp was supplied from a large creek about 1 km southeast of camp. To ensure an adequate water supply the main pump station was built immediately below a bedrock canyon. A metal waterline carried the water 130 m vertically to a relay station near camp where it was pumped in rubber hoses to the drill sites. The farthest drill site was 1800 m from the pump station on the creek.

Most holes were collared with HQ and later reduced to NQ. Core recovery and bit wear were serious problems in the highly fractured and deeply weathered rocks found in the vicinity of the surface showings. The best recoveries were obtained using split tube HQ equipment.



C-11 Diamond drill hole location with hole number

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FIGURE 17
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DRILL HOLE LOCATIONS

ICE PROPERTY

0 40 80 120 160 200 m

DRAWN/REVISED BY: TCB | PROJECT: FP
FILE: C:\FP\ICE\4C403\IC-DDHLOC | DATE: May 12, 1998

Table 1. Ice Property - Survey Data 1996 Drill Holes

Hole No.	Grid Location		UTM Location			Azm	Dip	Depth	Depth	Claim	Start	Finish	Logger
	E	N	E	N	Z			(m)	(ft)				
IC96-01	10,042.99	10,968.30	376,626.65	6,862,487.54	1,256.30	305	-50	181.66	596	Ice 10	06-Jul-96	11-Jul-96	L. Pigage
IC96-02	10,038.04	11,213.38	376,788.49	6,862,687.35	1,289.54	288	-49	116.13	381	Ice 12	12-Jul-96	14-Jul-96	T. Becker
IC96-03	10,099.08	11,195.23	376,806.71	6,862,636.45	1,277.80	316	-50	152.40	500	Ice 12	27-Jul-96	01-Aug-96	L. Pigage
IC96-04	10,030.83	11,146.25	376,722.75	6,862,637.72	1,282.87	308	-50	148.29	485.5	Ice 12	01-Aug-96	06-Aug-96	L. Pigage
IC96-05	10,100.73	10,997.30	376,690.26	6,862,476.49	1,246.15	306	-50	66.45	218	Ice 10	10-Aug-96	14-Aug-96	L. Pigage
IC96-06	10,044.89	11,104.17	376,709.01	6,862,595.56	1,275.73	304	-50	92.66	304	Ice 12	15-Aug-96	17-Aug-96	L. Pigage
IC96-07	10,101.30	11,097.61	376,750.41	6,862,556.72	1,262.21	320	-50	53.34	175	Ice 12	19-Aug-96	21-Aug-96	L. Pigage
IC96-08	9,952.58	11,099.12	376,631.86	6,862,646.43	1,286.06		-90	74.37	244	Ice 11	22-Aug-96	25-Aug-96	S. Lesnikoff
IC96-09	9,952.58	11,099.12	376,631.86	6,862,646.43	1,286.06	128	-50	74.37	244	Ice 11	26-Aug-96	30-Aug-96	S. Lesnikoff
IC96-10	9,590.00	10,510.00	375,995.00	6,862,395.00	1,240.00	165	-51	83.52	274	Ice 17	31-Aug-96	06-Sep-96	L. Pigage
IC96-11	9,848.35	10,699.96	376,310.62	6,862,387.85	1,237.68	300	-51	77.72	255	Ice 9	07-Sep-96	10-Sep-96	B. Gay
IC96-12	9,904.58	11,098.64	376,593.02	6,862,674.60	1,297.80	306	-50	70.41	231	Ice 11	11-Sep-96	13-Sep-96	L. Pigage
IC96-13	10,052.08	11,297.65	376,829.91	6,862,746.67	1,300.98	315	-48	98.76	324	Ice 12	12-Sep-96	16-Sep-96	T. Becker
IC96-14	10,000.37	11,099.57	376,670.51	6,862,618.35	1,274.97	308	-50	57.00	187	Ice 11	14-Sep-96	17-Sep-96	L. Pigage
IC96-15	9,984.52	11,213.02	376,725.28	6,862,718.90	1,290.60	308	-50	89.61	294	Ice 11	17-Sep-96	21-Sep-96	L. Pigage
IC96-16	9,950.23	11,099.06	376,629.93	6,862,647.78	1,286.13	308	-50	53.64	176	Ice 11	18-Sep-96	20-Sep-96	S. Lesnikoff
IC96-17	9,957.22	11,000.12	376,576.68	6,862,564.15	1,272.05	308	-50	64.62	212	Ice 9	21-Sep-96	23-Sep-96	L. Pigage
IC96-18	9,950.54	11,197.19	376,688.57	6,862,726.41	1,296.05	305	-50	77.42	254	Ice 11	22-Sep-96	25-Sep-96	L. Pigage
IC96-19	9,948.64	10,699.90	376,391.15	6,862,328.13	1,221.92	308	-50	58.83	193	Ice 9	24-Sep-96	26-Sep-96	B. Gay
IC96-20	9,908.64	11,194.91	376,653.53	6,862,749.53	1,313.33	310	-50	63.70	209	Ice 11	26-Sep-96	30-Sep-96	T. Reszat
IC96-21	10,002.16	10,962.65	376,590.47	6,862,507.32	1,259.34	312	-50	46.18	151.5	Ice 9	27-Sep-96	28-Sep-96	B. Gay
IC96-22	9,902.77	11,000.10	376,532.93	6,862,596.54	1,284.98	308	-50	44.50	146	Ice 9	29-Sep-96	01-Oct-96	L. Pigage
IC96-23	9,859.76	11,197.60	376,615.91	6,862,780.76	1,330.43	307	-50	104.85	344	Ice 11	01-Oct-96	06-Oct-96	T. Reszat
IC96-24	9,839.38	11,004.02	376,484.35	6,862,637.40	1,315.75	305	-50	78.03	256	Ice 9	02-Oct-96	06-Oct-96	L. Pigage
IC96-25	9,939.61	10,949.93	376,532.67	6,862,534.32	1,265.31		-90	51.82	170	Ice 9	06-Oct-96	08-Oct-96	B. Gay
IC96-26	9,813.74	11,199.76	376,580.23	6,862,809.87	1,350.50	308	-50	56.39	185	Ice 11	08-Oct-96	10-Oct-96	T. Reszat
IC96-27	9,940.24	10,949.92	376,533.16	6,862,533.94	1,265.10	130	-50	46.33	152	Ice 9	09-Oct-96	10-Oct-96	B. Gay
IC96-28	9,995.86	11,399.93	376,845.62	6,862,862.28	1,322.26	303	-50	85.04	279	Ice 11	11-Oct-96	15-Oct-96	T. Becker
IC96-29	10,002.51	11,296.60	376,789.47	6,862,775.33	1,308.71	303	-50	65.84	216	Ice 11	12-Oct-96	15-Oct-96	T. Becker
IC96-30	10,074.29	11,398.43	376,907.72	6,862,814.40	1,298.28	315	-49	82.30	270	Ice 12	16-Oct-96	18-Oct-96	L. Pigage
IC96-31	9,952.81	11,297.36	376,750.00	6,862,805.51	1,323.25	308	-49	61.57	202	Ice 11	17-Oct-96	20-Oct-96	T. Becker
IC96-32	9,898.15	11,399.31	376,766.77	6,862,919.92	1,362.08	296	-50	55.47	182	Ice 11	19-Oct-96	22-Oct-96	L. Pigage
IC96-33	9,903.61	11,297.07	376,710.32	6,862,834.55	1,337.09	310	-50	56.08	184	Ice 11	23-Oct-96	25-Oct-96	T. Becker
IC96-34	10,103.69	11,295.65	376,869.61	6,862,714.70	1,287.82	305	-50	114.91	377	Ice 12	23-Oct-96	26-Oct-96	T. Becker
								2704.19	8871.0				

Table 2. Ice Property - Survey Data 1997 "D" Drill Holes

Hole No.	Grid Location		UTM Location			Azm	Dip	Depth	Depth	Claim	Start	Finish	Logger
	E	N	E	N	Z			(m)	(ft)				
ID97-01	10,103.46	11,295.50	376,870.17	6,862,714.36	1,285.82	312	-75	173.13	568	Ice 12	May 14	May 17	Sefika
ID97-02	10,174.53	11,300.11	376,929.69	6,862,675.85	1,267.10	310	-50	210.01	689	Ice 12	May 17	May 21	Sefika
ID97-03	10,174.53	11,300.11	376,929.69	6,862,675.85	1,267.10	310	-70	178.00	584	Ice 12	May 22	May 25	Sefika
ID97-04	10,078.22	11,297.85	376,809.11	6,862,731.20	1,294.20	303	-50	98.45	323	Ice 12	May 26	May 29	Sefika
ID97-05	10,116.55	11,244.52	376,850.89	6,862,665.71	1,277.94	318	-50	263.96	866	Ice 12	May 29	June 5	Sefika
ID97-06	10,269.69	11,302.83	377,007.78	6,862,621.40	1,255.02	314	-50	188.67	619	Ice 12	June 4	June 10	Tanja
ID97-07	10,116.68	11,244.67	376,850.22	6,862,665.75	1,277.82	318	-80	174.96	574	Ice 12	June 6	June 10	Sefika
ID97-08	10,196.13	11,240.60	376,911.63	6,862,615.18	1,257.48	307	-50	132.28	434	Ice 12	June 10	June 14	Sefika
ID97-09	10,269.69	11,302.83	377,007.79	6,862,621.40	1,255.02	305	-72	186.54	612	Ice 12	June 10	June 15	Tanja
ID97-10	10,196.73	11,240.56	376,912.09	6,862,614.79	1,257.66	300	-80	149.96	492	Ice 12	June 14	June 16	Sefika
ID97-11	10,157.76	11,347.02	376,944.15	6,862,723.54	1,273.16	309	-51	190.20	624	Ice 12	June 16	June 21	Bryan
ID97-12	10,111.19	11,347.60	376,907.06	6,862,751.72	1,285.67	303	-50	167.94	551	Ice 12	June 17	June 21	Sefika
ID97-13	10,119.35	11,397.15	376,943.16	6,862,786.67	1,283.25	305	-50	149.05	489	Ice 12	June 21	June 24	Sefika
ID97-14	10,211.88	11,347.01	376,987.63	6,862,691.30	1,264.03	309	-51	192.02	630	Ice 12	June 21	June 27	Bryan
ID97-15	10,120.71	11,449.10	376,975.15	6,862,827.60	1,283.68	305	-49	127.71	419	Ice 12	June 25	June 28	Sefika
ID97-16	10,212.85	11,347.12	376,988.57	6,862,690.81	1,264.04	310	-75	193.85	636	Ice 12	June 27	July 2	Bryan
ID97-17	10,163.71	11,447.26	377,008.59	6,862,800.53	1,274.61	307	-50	132.28	434	Ice 12	June 28	July 3	Sefika
ID97-18	10,182.78	11,397.91	376,994.59	6,862,749.36	1,267.19	307	-44	178.31	585	Ice 12	July 3	July 7	Tanja
ID97-19	10,165.32	11,450.11	377,008.59	6,862,800.53	1,274.61	304	-69	178.00	584	Ice 12	July 3	July 7	Sefika
ID97-20	10,183.47	11,397.71	376,995.03	6,862,748.79	1,263.21	308	-66	156.97	515	Ice 12	July 7	July 11	Tanja
ID97-21	10,254.36	11,452.93	377,088.77	6,862,752.03	1,263.21	304	-51	155.45	510	Ice 12	July 8	July 13	Sefika
ID97-22	10,259.56	11,398.60	377,056.69	6,862,704.19	1,260.26	307	-50	146.30	480	Ice 12	July 11	July 15	Tanja
ID97-23	10,254.64	11,452.96	377,089.01	6,862,751.88	1,263.33	308	-70	271.73	891.5	Ice 12	July 13	July 19	Sefika
ID97-24	10,260.17	11,398.51	377,057.16	6,862,703.72	1,260.17	306	-70	159.41	523	Ice 12	July 15	July 20	Tanja
ID97-25	10,296.76	11,357.51	377,062.08	6,862,649.21	1,253.90	309	-58	185.62	609	Ice 12	July 20	July 25	Tanja
ID97-26	10,169.47	11,505.01	377,047.01	6,862,843.32	1,271.01	301	-70	164.59	540	Ice 14	July 26	July 30	Bryan
ID97-27	10,063.20	11,446.29	376,927.30	6,862,859.43	1,301.86	309	-51	110.03	361	Ice 12	July 30	Aug 4	Tanja
ID97-28	10,147.58	11,196.41	376,846.45	6,862,608.69	1,266.61	307	-50	145.69	478	Ice 12	Aug 1	Aug 5	Sefika
ID97-29	10,044.81	11,398.80	376,884.28	6,862,832.24	1,302.74	306	-48	63.09	207	Ice 12	Aug 4	Aug 6	Tanja
ID97-30	10,049.24	11,245.67	376,796.72	6,862,706.63	1,295.49	306	-47	103.02	338	Ice 12	Aug 5	Aug 8	Sefika
ID97-31	10,047.64	11,346.80	376,855.63	6,862,788.80	1,300.87	309	-50	100.89	331	Ice 12	Aug 6	Aug 9	Tanja
ID97-32	10,178.19	11,557.58	377,085.96	6,862,880.68	1,273.68	306	-73	111.25	365	Ice 14	Aug 10	Aug 13	Sefika
ID97-33	10,262.57	11,496.80	377,117.54	6,862,781.27	1,264.21	306	-49	158.80	521	Ice 14	Aug 13	Aug 16	Sefika
ID97-34	10,199.12	11,195.48	376,887.17	6,862,577.13	1,254.21	311	-50	168.55	553	Ice 12	Aug 17	Aug 20	Sefika
ID97-35	10,211.66	11,098.27	376,839.38	6,862,491.56	1,244.35	306	-50	89.00	292	Ice 12	Aug 20	Aug 22	Sefika
ID97-36	10,116.99	11,298.99	376,882.79	6,862,709.20	1,284.01	306	-54	175.41	575.5	Ice 12	Sept 5	Sept 9	Kosta
								5731.15	18803.0				

Table 3. Ice Property - Survey Data 1997 "C" Drill Holes

Hole No.	Grid Location		UTM Location			Azm	Dip	Depth (m)	Depth (ft)	Claim	Start	Finish	Logger
	E	N	E	N	Z								
IC97-35	9,975.32	11,099.30	376,650.23	6,862,633.05	1,281.37		-90	45.72	150	Ice 11	July 20	July 22	Sefika
IC97-36	9,950.57	11,099.16	376,630.30	6,862,647.70	1,286.43		-90	41.76	137	Ice 11	July 22	July 24	Sefika
IC97-37	9,900.45	11,099.14	376,590.02	6,862,677.52	1,299.63		-90	39.93	131	Ice 11	July 24	July 25	Sefika
IC97-38	9,927.00	11,099.21	376,611.38	6,862,661.76	1,290.94		-90	34.75	114	Ice 11	July 26	July 27	Sefika
IC97-39	9,999.69	11,099.25	376,669.82	6,862,618.52	1,274.58		-90	31.70	104	Ice 12	July 27	July 28	Sefika
IC97-40	10,025.04	11,098.85	376,689.94	6,862,603.11	1,277.77		-90	35.36	116	Ice 12	July 28	July 29	Sefika
IC97-41	10,050.13	11,104.43	376,713.42	6,862,592.65	1,275.38		-90	35.97	118	Ice 12	July 29	July 29	Sefika
IC97-42	10,076.04	11,099.94	376,731.58	6,862,573.61	1,266.70		-90	15.24	50	Ice 12	July 30	July 30	Sefika
IC97-43	9,898.16	10,902.22	376,470.92	6,862,520.78	1,264.76		-90	37.80	124	Ice 9	July 31	Aug 1	Sefika
IC97-44	9400	10565	375921	6862509	1267	270	-50	164.13	538.5	Ice 17	Aug 9	Aug 12	Kosta
IC97-45	9400	10565	375921	6862509	1267	305	-50	110.95	364	Ice 17	Aug 12	Aug 14	Kosta
IC97-46	9,975.00	11,150.00	376,680.18	6,862,674.01	1,289.10		-90	46.94	154	Ice 11	Aug 23	Aug 24	Sefika
IC97-47	9,975.01	11,050.10	376,620.73	6,862,593.73	1,274.56		-90	33.83	111	Ice 9	Aug 24	Aug 25	Sefika
IC97-48	9,950.33	11,049.80	376,600.71	6,862,608.19	1,278.90		-90	32.31	106	Ice 9	Aug 25	Aug 26	Sefika
IC97-49	9,950.16	11,149.50	376,660.22	6,862,688.17	1,287.16		-90	29.26	96	Ice 11	Aug 27	Aug 28	Sefika
IC97-50	9,925.03	11,049.92	376,580.46	6,862,623.34	1,284.48		-90	34.14	112	Ice 9	Aug 28	Aug 29	Sefika
IC97-51	9,924.93	11,000.02	376,550.67	6,862,583.30	1,279.49		-90	29.57	97	Ice 9	Aug 29	Aug 30	Sefika
IC97-52	9,949.99	11,000.10	376,570.85	6,862,568.45	1,274.23		-90	34.14	112	Ice 9	Aug 30	Aug 30	Sefika
IC97-53	9,962.38	11,000.05	376,580.77	6,862,561.03	1,270.94	115	-70	37.19	122	Ice 9	Aug 31	Aug 31	Kosta
IC97-54	9,914.88	10,950.08	376,512.87	6,862,549.16	1,269.36		-90	34.14	112	Ice 9	Sept 1	Sept 1	Sefika
IC97-55	9,975.18	11,200.14	376,710.17	6,862,714.19	1,289.05		-90	35.97	118	Ice 11	Sept 2	Sept 2	Sefika
IC97-56	9,925.09	11,250.32	376,699.80	6,862,784.33	1,319.22		-90	77.11	253	Ice 11	Sept 3	Sept 5	Kosta
IC97-57	10,000.00	11,199.99	376,730.03	6,862,699.30	1,291.59		-90	41.76	137	Ice 12	Sept 3	Sept 5	Kosta
IC97-58	9,900.52	11,250.61	376,680.22	6,862,799.19	1,324.31		-90	39.93	131	Ice 11	Sept 6	Sept 7	Sefika
IC97-59	9,875.30	11,250.34	376,659.79	6,862,813.99	1,332.65		-90	39.32	129	Ice 11	Sept 7	Sept 8	Sefika
IC97-60	9,873.74	11,194.45	376,625.28	6,862,770.01	1,324.85		-90	53.64	176	Ice 11	Sept 8	Sept 10	Sefika
IC97-61	10,048.29	11,147.00	376,737.29	6,862,627.97	1,280.61		-90	40.84	134	Ice 12	Sept 10	Sept 11	Sefika
IC97-62	9,975.47	11,299.82	376,769.74	6,862,794.12	1,318.05		-90	80.47	264	Ice 11	Sept 10	Sept 12	Sefika
IC97-63	10,025.55	11,149.85	376,720.71	6,862,643.79	1,281.72		-90	29.11	95.5	Ice 12	Sept 11	Sept 11	Kosta
IC97-64	9,999.30	11,149.73	376,699.54	6,862,659.33	1,280.55		-90	36.88	121	Ice 12	Sept 12	Sept 13	Sefika
IC97-65	9,951.08	11,300.16	376,750.34	6,862,808.90	1,323.15		-90	33.22	109	Ice 11	Sept 12	Sept 13	Kosta
IC97-66	10,049.84	11,050.03	376,680.80	6,862,549.12	1,263.27		-90	17.37	57	Ice 10	Sept 13	Sept 14	Kosta
IC97-67	9,975.44	11,350.03	376,799.60	6,862,834.47	1,325.04		-90	44.81	147	Ice 11	Sept 14	Sept 15	Sefika
IC97-68	10,025.53	11,049.54	376,660.98	6,862,563.19	1,264.20		-90	17.98	59	Ice 10	Sept 14	Sept 15	Kosta
IC97-69	10,000.54	10,999.54	376,611.14	6,862,537.90	1,265.76		-90	31.39	103	Ice 9	Sept 15	Sept 16	Kosta
IC97-70	9,999.33	11,299.89	376,788.96	6,862,779.96	1,309.76		-90	49.38	162	Ice 12	Sept 15	Sept 16	Sefika
IC97-71	10,000.15	10,950.35	376,581.54	6,862,498.61	1,257.58		-90	26.21	86	Ice 9	Sept 16	Sept 16	Kosta

Table 3 cont'. Ice Property - Survey Data 1997 "C" Drill Holes

Hole No.	Grid Location		UTM Location			Azm	Dip	Depth (m)	Depth (ft)	Claim	Start	Finish	Logger
	E	N	E	N	Z								
IC97-72	10,024.73	10,949.32	376,600.67	6,862,483.15	1,253.57		-90	27.43	90	Ice 10	Sept 17	Sept 17	Sefika
IC97-73	9,927.63	11,300.18	376,731.53	6,862,822.88	1,328.61		-90	32.92	108	Ice 10	Sept 17	Sept 17	Sefika
IC97-74	9,949.80	11,250.09	376,719.51	6,862,769.43	1,311.96		-90	49.99	164	Ice 11	Sept 18	Sept 19	Kosta
IC97-75	10,025.70	10,999.66	376,631.43	6,862,523.02	1,260.97		-90	31.09	102	Ice 10	Sept 18	Sept 18	Kosta
IC97-76	10,050.21	10,999.93	376,651.28	6,862,508.65	1,257.54		-90	31.09	102	Ice 10	Sept 19	Sept 19	Sefika
IC97-77	9,975.59	11,250.20	376,740.31	6,862,754.17	1,304.57		-90	45.42	149	Ice 11	Sept 19	Sept 20	Kosta
IC97-78	10,000.85	11,049.78	376,641.29	6,862,578.09	1,268.79		-90	31.09	102	Ice 9	Sept 20	Sept 20	Sefika
IC97-79	9,900.15	11,199.67	376,649.61	6,862,758.48	1,316.39		-90	49.99	164	Ice 11	Sept 20	Sept 21	Sefika
IC97-80	9,965.03	10,950.27	376,553.28	6,862,519.46	1,253.78		-90	26.82	88	Ice 9	Sept 21	Sept 21	Kosta
IC97-81	9,900.57	11,150.01	376,620.38	6,862,718.33	1,308.63		-90	45.72	150	Ice 11	Sept 21	Sept 22	Kosta
IC97-82	9,955.94	11,199.85	376,694.54	6,862,725.41	1,295.33		-90	46.33	152	Ice 11	Sept 22	Sept 23	Sefika
IC97-83	9,924.56	11,149.16	376,639.15	6,862,703.37	1,299.71		-90	46.63	153	Ice 11	Sept 23	Sept 24	Sefika
IC97-84	10,000.18	11,249.48	376,759.64	6,862,738.95	1,296.83		-90	40.23	132	Ice 12	Sept 23	Sept 24	Kosta
IC97-85	9,939.21	11,199.85	376,681.10	6,862,735.37	1,298.34		-90	43.28	142	Ice 11	Sept 24	Sept 25	Kosta
								2148.23	7048.0				

Unoxidized, relatively massive rock produced good recovery (greater than 95%) with both core diameters. Sulphide-rich intervals generally cored better than wallrocks. Permafrost was not encountered in any of the holes.

The 1997 drill program was designed to test the extension of stratiform massive sulphide mineralization intersected in the last hole of the 1996 program and to define the grade and extent of the secondary copper zone. Holes were collared on cut grid lines and are generally vertical or inclined to the northwest approximately perpendicular to bedding. Although the holes cut bedding at high angles, they were subparallel to the dip of most faults. Surveying of collar locations and drill hole orientations was done with a Nikon DTM-A20 total station instrument. Downhole surveys were performed using a Pajari borehole instrument. Shallow inclined holes were surveyed downhole at least once and deeper inclined holes at least twice. Short vertical holes were not usually surveyed downhole. Drill hole deviation was minimal and none of the holes was abandoned due to poor drilling conditions. Collar locations are marked with wooden posts labelled with inscribed metal tags.

Drill core was logged on site and is stored at the camp on the property. Drill hole data was entered onto spreadsheets in the field and later transferred to a PC-XPLOR database for plotting vertical sections and plans. Synoptic drill logs are contained in Appendix V.

Mineralized intervals and adjacent wallrocks were split and one-half was sent to Chemex Labs. All samples were crushed, pulverized to -150 mesh using a chrome steel ring mill, digested in nitric-aqua regia and then geochemically analyzed for 32 elements using the ICP technique.

Intervals with significant mineralization were also assayed for copper. Most mineralized intervals were also assayed for gold. Specific gravity determinations were done on the pulps from about 50% of the mineralized samples. The elements aluminum, barium, beryllium, calcium, chromium, gallium, lanthanum, manganese, potassium, scandium, sodium, strontium, thallium, titanium and tungsten are often only partially leached by the digestion used for ICP analysis. These elements do not include any of the metals that were the exploration targets for the program. Certificates of Analysis for drill core are in Appendix VI.

Four core samples were forwarded to Vancouver Petrographics for verification of mineral modes and textures. A report describing these samples is included as Appendix VII. Selected core samples were also sent to Chemex Labs for XRF whole rock analysis. Certificates of Analysis for these samples are included in Appendix VIII.

Results

During the 1996 and 1997 exploration program 116 diamond drill holes tested the Ice Deposit while five holes explored nearby soil geochemical anomalies. Results from the drill area are discussed in the following paragraphs while the other five holes are discussed the section called Results from Outlying Geochemical Targets.

Two types of mineralization have been intersected in drill holes on the Ice property. The first type is primary mineralization deposited from hydrothermal solutions as horizons on the seafloor during volcanism or in underlying stringer sulphide feeder zones. The other type is secondary mineralization, all or most of which is relatively young (probably post-glacial) and is the result of oxygenated groundwater interaction with primary mineralization and wallrocks.

Table 4 lists all significant intersections from the 1996 and 1997 drilling with weighted average grades and general descriptions of the mineralization.

Primary mineralization is found in a massive sulphide horizon deposited parallel to stratigraphy and zones of stringer sulphides which crosscut stratigraphy. The massive sulphide horizon occurs at a major stratigraphic contact immediately below a thick equigranular hanging wall massive basalt ($MSBS_3$). It overlies a localized porphyritic basalt (PHBS) or a more extensive footwall breccia basalt ($BRBS_2$). There are usually about 20 m of barren basalt separating the sulphide horizon from the underlying stringer sulphide zone. The areas underlain by massive sulphide and stringer sulphides are shown in Figures 34 and 35 respectively.

The massive sulphide horizon (PYMS) comes to surface near the centre of the drill area and its western extension has been eroded. The remaining portion of the horizon is concentrically zoned but has been bisected and displaced by the Baseline Fault. The best massive sulphide intersection came from Hole IC96-34 which averaged 5.20% copper over 20.56 m. Other significant intersections from the high grade core include 8.56% over 5.92 m, 3.57% over 28.55 m, 4.09% over 7.55 m, 4.31% over 19.75 m, 3.47% m 25.09 m, 3.20% over 28.51 m, 3.79% over 5.69 m and 4.18% over 8.97 m. The high grade core is surrounded by an apron of thinner, lower grade massive sulphide mineralization typically grading between 1.5 to 3% copper over 1 to 5 m widths. Massive sulphide intersections average about 0.5 g/t gold, 15 g/t silver, 0.3% zinc and 0.08% cobalt. The north-northeast trending fault forms the eastern limit of the massive sulphide horizon. Offset on this fault has not yet been determined. It is possible that the feature is a synvolcanic growth fault which formed the edge of a localized graben containing the VMS mineralization.

TABLE 4: ICE PROPERTY, SIGNIFICANT DRILL INTERSECTIONS 1996 AND 1997

Hole	Section	From (m)	To (m)	Width (m)	Copper (%)	Zinc (%)	Cobalt (%)	Silver (g/t)	Gold (g/t)	Description
IC96-01	10,950	16.76	42.06	25.30	0.50	0.05	0.01	0.1	-	secondary
IC96-02	11,200	24.99	58.24	33.25	2.01	0.29	0.02	0.4	0.02	secondary
IC96-03	11,200	60.35	61.57	2.36	1.25	0.06	0.01	1.9	0.04	stringer
		117.71	122.85	5.14	0.35	0.03	0.01	0.4	-	stringer
IC96-04	11,150	10.97	34.75	23.78	0.31	0.13	0.01	-	NA	secondary
IC96-06	11,100	5.33	27.13	21.80	1.01	0.05	-	0.1	NA	secondary
IC96-08	11,100	12.30	27.80	15.50	1.74	0.06	0.03	-	0.01	secondary
IC96-09	11,100	20.73	53.04	32.31	1.13	0.07	0.02	0.3	0.02	secondary
IC96-13	11,300	46.72	57.03	10.31	2.22	0.08	0.02	4.9	NA	secondary
IC96-14	11,100	2.90	34.44	31.54	1.04	0.05	0.01	0.9	0.02	secondary
IC96-16	11,100	6.40	32.00	25.60	0.72	0.09	0.01	-	NA	secondary
IC96-17	11,000	1.22	23.32	22.10	0.38	0.06	0.01	-	NA	secondary
IC96-18	11,200	16.16	36.27	20.11	0.49	0.07	0.01	0.9	0.03	secondary
IC96-20	11,200	8.23	33.22	24.99	0.40	0.11	0.01	0.3	-	secondary
		45.42	51.10	5.68	0.31	0.15	0.01	2.3	0.06	secondary
IC96-21	10,950	3.66	9.75	6.09	0.31	0.01	-	-	-	secondary
IC96-23	11,200	8.84	14.94	6.10	0.32	0.06	-	0.8	0.02	secondary
IC96-25	9,950	7.62	21.03	13.41	0.49	0.09	0.01	-	NA	secondary
IC96-27	10,950	23.25	27.85	4.60	0.42	0.16	0.02	-	-	secondary
IC96-29	11,300	19.20	29.41	10.21	0.76	0.08	0.01	1.2	0.09	secondary
IC96-34	11,300	72.10	92.66	20.56	5.20	0.21	0.06	29.1	0.60	secondary
ID97-01	11,300	83.12	91.09	7.97	2.46	0.47	0.10	18.9	0.63	massive
		105.77	122.83	17.06	1.18	0.13	0.04	2.8	0.10	stringer
ID97-02	11,300	83.80	89.74	5.94	2.05	0.39	0.05	7.9	0.40	massive
		121.34	150.57	29.23	0.96	0.06	0.03	0.9	0.03	stringer
ID97-03	11,300	94.06	97.49	3.43	2.20	0.25	0.06	7.1	0.43	massive
ID97-04	11,300	51.21	55.61	4.40	2.71	0.04	0.06	22.5	0.29	massive
ID97-05	11,250	95.40	101.19	5.79	0.58	0.20	0.01	2.6	0.08	stringer

TABLE 4 (cont'd): ICE PROPERTY, SIGNIFICANT DRILL INTERSECTIONS 1996 AND 1997

Hole	Section	From (m)	To (m)	Width (m)	Copper (%)	Zinc (%)	Cobalt (%)	Silver (g/t)	Gold (g/t)	Description
ID97-06	11,300	151.69	153.70	2.01	1.23	0.14	0.03	6.0	0.27	massive
	11,250	77.20	78.18	0.98	7.42	0.22	0.05	15.8	0.62	massive
		110.95	135.26	24.31	0.51	0.06	0.01	1.3	0.05	stringer
ID97-08	11,250	73.95	75.12	1.17	2.88	0.34	0.07	14.0	0.30	massive
ID97-09	11,300	141.97	142.89	0.92	0.70	0.82	0.01	2.2	0.35	massive
		150.77	151.25	0.48	2.04	0.41	0.04	10.4	0.67	massive
ID97-10	11,250	101.15	102.10	0.95	0.72	0.07	0.01	2.8	0.19	massive
ID97-11	11,350	88.57	94.49	5.92	8.56	0.03	0.12	12.7	0.34	massive
		113.39	114.02	0.63	2.93	0.11	0.02	8.8	0.06	stringer
		132.08	140.70	8.62	0.61	0.59	0.02	3.7	0.12	stringer
		163.07	168.24	5.17	0.58	0.06	0.01	1.0	0.01	stringer
ID97-12	11,350	92.10	127.23	35.13	0.71	0.22	0.02	4.4	0.10	stringer
ID97-13	11,400	90.02	118.57	28.55	3.57	0.52	0.06	11.9	NA	massive/stringer
	includes	90.02	101.00	10.98	6.83	1.02	0.12	24.2	0.56	massive/stringer
ID97-14	11,350	108.12	114.25	6.13	1.98	0.28	0.06	11.9	0.38	massive
ID97-16	11,350	130.68	136.23	5.55	2.73	0.23	0.07	9.3	0.40	massive
ID97-19	11,450	93.90	96.25	2.35	2.60	0.08	0.07	10.0	0.47	massive
		146.91	159.72	12.81	0.83	0.09	0.01	4.4	0.04	stringer
ID97-20	11,400	86.77	94.32	7.55	4.09	0.09	0.03	17.2	0.74	massive
		135.84	139.19	3.35	0.91	0.01	0.03	1.4	0.04	stringer
ID97-22	11,400	132.02	135.08	3.06	0.98	0.05	0.06	4.1	0.40	massive
ID97-26	11,500	88.58	91.70	3.12	2.18	0.12	0.06	7.4	0.67	massive
ID97-28	11,200	101.46	107.75	6.29	0.89	0.02	-	1.9	0.02	stringer
		128.47	132.28	3.81	1.47	0.12	0.06	4.7	0.05	stringer
ID97-30	11,250	27.13	41.72	14.59	2.14	0.42	0.06	7.0	0.27	massive
ID97-31	11,350	44.50	50.29	5.79	1.56	0.33	0.01	0.8	0.05	massive
ID97-34	11,200	134.76	142.18	7.42	0.49	0.02	0.01	0.6	NA	stringer
ID97-36	11,300	79.55	99.30	19.75	4.31	0.17	0.06	14.8	0.68	massive
		107.00	113.08	6.08	0.90	0.21	0.03	3.3	NA	stringer
IC97-35	11,100	7.92	29.40	21.48	0.94	0.03	0.02	0.5	NA	secondary/stringer

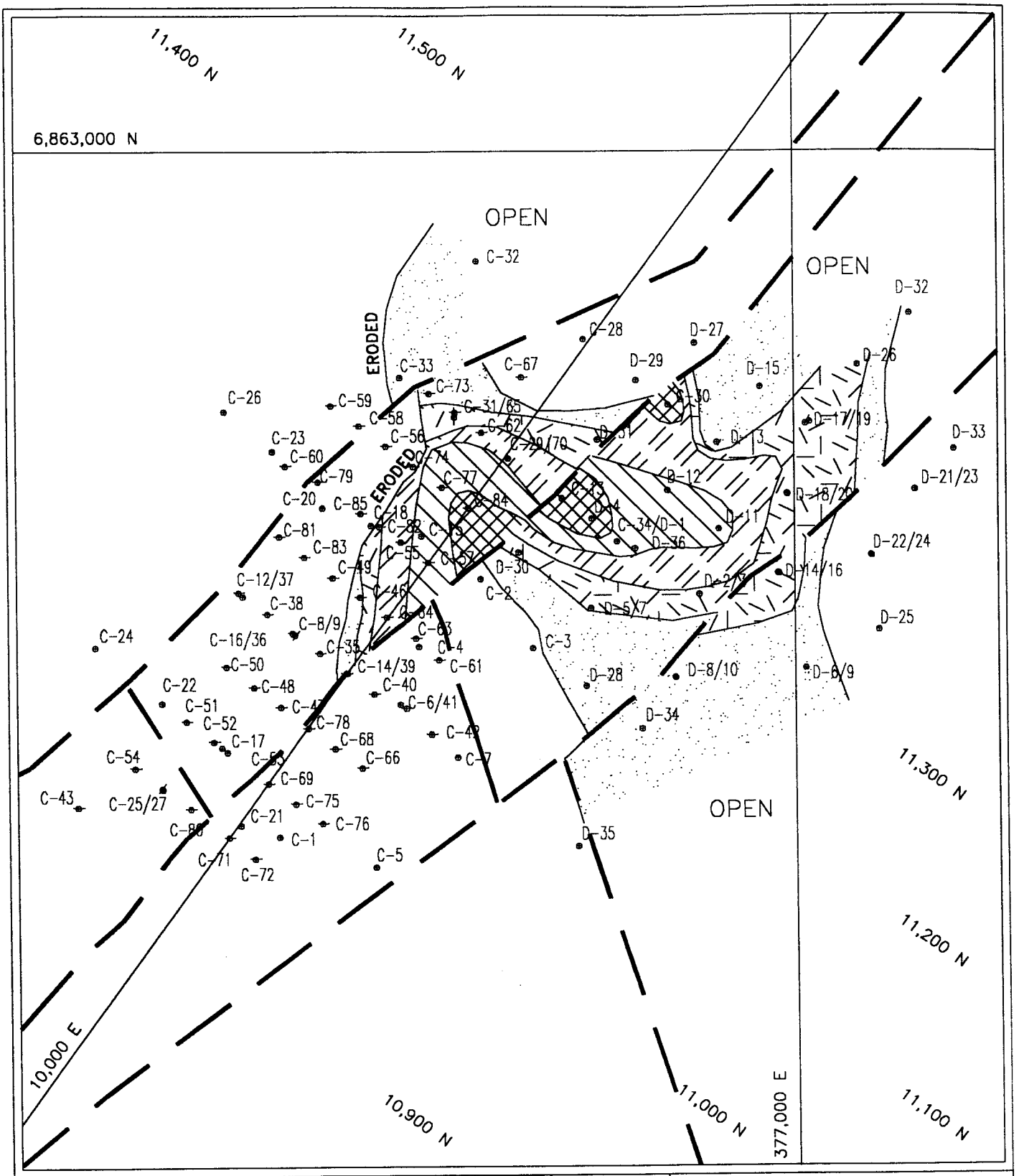
TABLE 4 (cont'd): ICE PROPERTY, SIGNIFICANT DRILL INTERSECTIONS 1996 AND 1997

Hole	Section	From (m)	To (m)	Width (m)	Copper (%)	Zinc (%)	Cobalt (%)	Silver (g/t)	Gold (g/t)	Description
IC97-36	11,100	5.20	28.04	22.84	1.01	0.09	0.01	0.1	NA	secondary/stringer
IC97-37	11,100	1.83	28.65	26.82	0.37	0.10	0.01	-	NA	secondary/stringer
IC97-38	11,100	10.36	27.13	16.77	1.00	0.04	0.04	-	0.02	secondary/stringer
IC97-39	11,100	3.05	21.67	18.62	0.88	0.18	0.01	0.8	NA	secondary
IC97-40	11,100	10.36	22.56	12.20	1.44	0.02	-	-	NA	secondary
IC97-41	11,100	9.60	16.07	6.47	1.48	0.07	0.01	-	NA	secondary
IC97-46	11,150	19.26	44.35	25.09	3.47	0.08	0.03	2.0	0.12	secondary/massive
IC97-47	11,050	10.66	26.21	15.55	1.44	0.09	-	-	NA	secondary
IC97-48	11,050	10.97	20.00	9.03	0.82	0.05	-	-	NA	secondary
IC97-49	11,150	12.60	29.26	16.66	1.03	0.19	0.01	0.4	NA	secondary/stringer
IC97-50	11,050	7.00	16.72	9.72	0.33	0.04	-	0.1	NA	secondary
IC97-51	11,000	3.35	18.07	14.72	0.38	0.06	0.01	-	NA	secondary
IC97-52	11,000	3.03	23.70	20.67	0.58	0.05	-	-	NA	secondary
IC97-53	11,000	2.44	23.00	20.56	0.55	0.03	-	0.1	NA	secondary
IC97-55	11,200	3.65	25.29	21.64	0.89	0.23	0.01	0.1	NA	secondary
IC97-56	11,250	2.43	77.11	74.68	0.52	0.09	0.01	0.6	NA	secondary
IC97-57	11,200	13.25	41.76	28.51	3.20	0.29	0.03	2.5	NA	secondary/massive
IC97-58	11,250	2.00	4.85	2.85	0.31	0.09	-	1.4	NA	secondary
		13.11	20.88	7.77	0.23	0.06	-	0.2	NA	secondary
IC97-59	11,250	3.30	21.03	17.73	0.37	0.06	-	0.4	NA	secondary
		27.13	37.80	10.67	0.32	0.06	0.01	0.6	NA	secondary
IC97-60	11,200	2.09	34.44	32.35	0.32	0.09	-	1.6	NA	secondary/massive
		40.91	44.65	3.74	0.97	0.07	0.02	1.3	NA	secondary/massive
IC97-62	11,300	22.25	28.65	6.40	0.34	0.10	-	-	NA	secondary
		32.61	34.75	2.14	0.44	0.11	-	-	NA	secondary
IC97-63	11,150	6.10	19.00	12.90	0.56	0.03	-	-	NA	secondary
IC97-64	11,150	17.22	32.46	15.24	1.83	0.12	0.02	1.3	NA	secondary/massive
IC97-65	11,300	12.19	15.30	3.11	0.23	0.10	-	-	NA	secondary/massive
IC97-66	11,050	4.30	9.75	5.45	0.46	0.03	-	-	NA	secondary

TABLE 4 (cont'd): ICE PROPERTY, SIGNIFICANT DRILL INTERSECTIONS 1996 AND 1997

Hole	Section	From (m)	To (m)	Width (m)	Copper (%)	Zinc (%)	Cobalt (%)	Silver (g/t)	Gold (g/t)	Description
IC97-69	11,000	3.66	28.96	25.30	0.68	0.03	-	-	NA	secondary
IC97-70	11,300	29.87	38.40	8.53	2.97	0.07	0.03	7.0	NA	secondary/massive
	includes	32.71	38.40	5.69	3.79	0.07	0.04	10.5	NA	secondary/massive
IC97-71	10,950	3.35	7.35	4.00	0.30	0.02	-	-	NA	secondary
IC97-72	10,950	9.75	17.53	7.78	0.58	0.02	-	-	NA	secondary
IC97-73	11,300	2.10	14.78	12.68	1.29	0.20	0.01	5.8	NA	secondary/massive
IC97-74	11,250	1.22	16.34	15.12	0.27	0.02	-	0.3	NA	secondary
		26.98	35.10	8.12	0.28	0.04	-	0.2	NA	secondary
IC97-75	11,000	6.00	29.65	23.65	0.33	0.04	-	0.1	NA	secondary
IC97-76	11,000	6.15	10.67	4.52	0.55	0.02	-	-	NA	secondary
		14.48	18.44	3.96	0.27	0.09	-	-	NA	secondary
IC97-77	11,250	5.79	8.84	3.05	0.77	0.14	0.01	-	NA	secondary/massive
		18.00	29.87	11.87	0.46	0.16	0.01	-	NA	secondary
IC97-78	11,050	13.66	20.42	16.76	0.63	0.06	-	-	NA	secondary
IC97-79	11,200	16.31	23.62	7.31	0.24	0.03	-	0.1	NA	secondary
		29.57	48.65	19.08	0.26	0.14	0.01	0.3	NA	secondary/stringer
IC97-81	11,150	10.36	20.75	10.39	0.87	0.03	0.02	1.2	NA	secondary/stringer
		25.60	28.85	3.25	0.32	0.15	0.01	0.9	NA	secondary/stringer
IC97-82	11,200	1.22	31.85	30.63	0.95	0.09	0.02	4.0	NA	secondary/stringer
IC97-83	11,150	31.39	37.80	6.41	0.42	0.13	0.01	0.3	NA	secondary/stringer
IC97-84	11,250	11.89	31.70	19.81	2.39	0.09	0.03	6.9	NA	secondary/massive
	includes	17.68	26.65	8.97	4.18	0.09	0.05	14.3	NA	secondary/massive
IC97-85	11,200	4.00	29.75	25.75	0.28	0.09	-	0.3	NA	secondary

NA = Not assayed or assays not available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OPEN
OPEN
ERODED
ERODED
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C-33
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C-5
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D-33
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D-11
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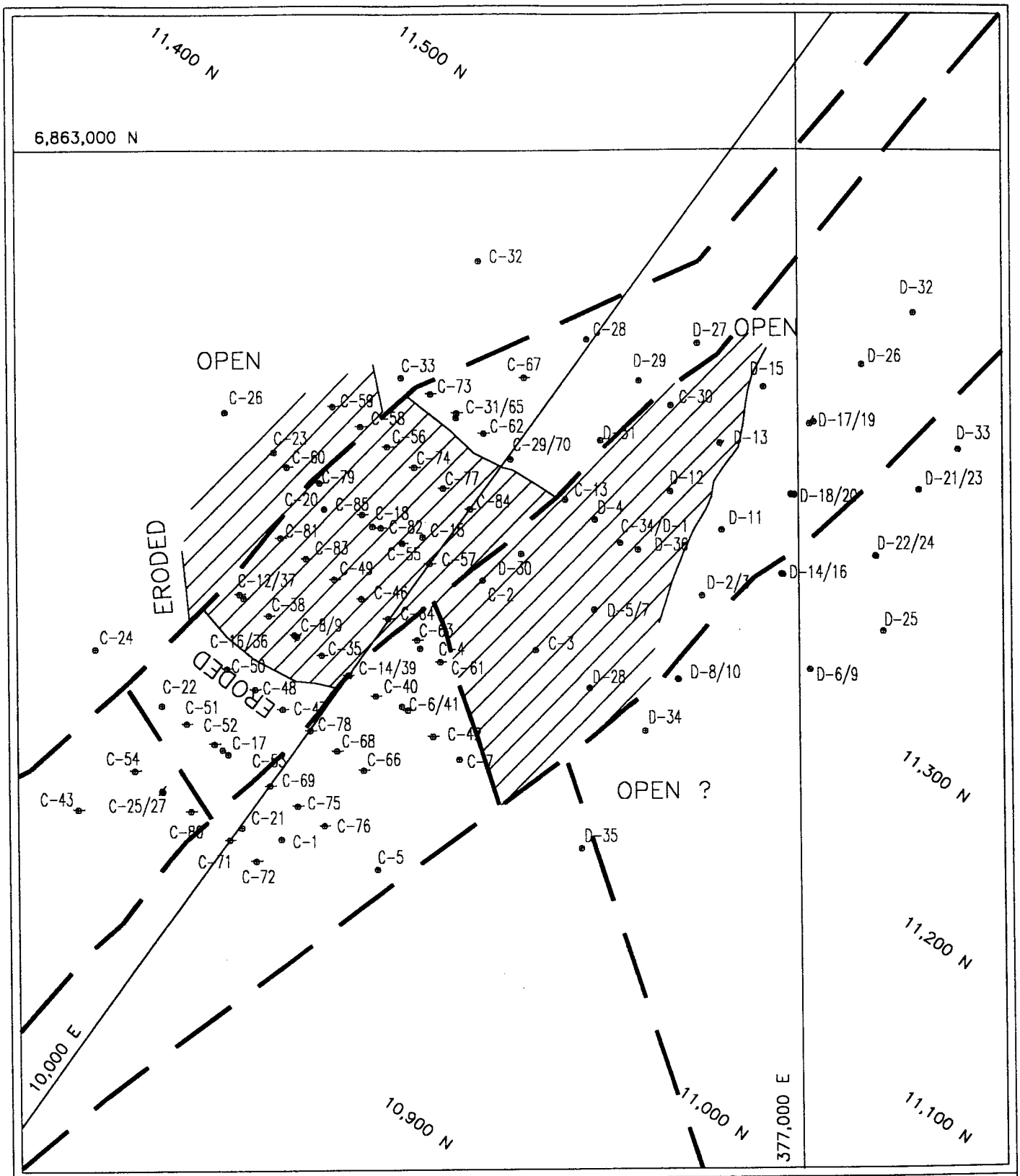
D-36
D-22/24
D-14/16
D-30
C-2
D-25
C-3
D-28
D-8/10
D-6/9
D-34
D-35
11,300 N
11,200 N
11,100 N
11,000 N
10,900 N
10,000 E
377,000 E
≥ 10 m massive sulphides
≥ 5 < 10 m massive sulphides
≥ 3 < 5 m massive sulphides
≥ 1 < 3 m massive sulphides
≥ 0.1 – 1 m massive sulphides
Fault
EXPATRIATE RESOURCES LTD.
FIGURE 34
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
MASSIVE SULPHIDE ISOPATHS
ICE PROPERTY
0 100 200 300 400 500m
DRAWN/REVISED BY: TCB
PROJECT: FP
FILE: C:\FP\ICE\ACADJ\IC-ZON1.DWG
DATE: May 11, 1998



Area underlain by stringer sulphides

Fault

EXPATRIATE RESOURCES LTD.

FIGURE 35

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

STRINGER SULPHIDE ZONE

ICE PROPERTY

0 100 200 300 400 500m

DRAWN/REVISED BY: TCB

PROJECT: FP

FILE: C:\FP\ICE\ACAD3\IC-ZON1.DWG

DATE: May 11, 1998

The massive sulphide intervals consist of continuous mineralization except for the occasional short sections of pyritic basalt which have been variously interpreted as narrow flows, post-mineralization dykes or slump blocks. The mineralization is typically fragmental and rarely exhibits mineral banding. The sulphides are dominated by relatively coarse grained subhedral to euhedral pyrite intergrown with chalcopyrite, minor sphalerite and locally abundant bornite containing digenite. No cobalt minerals have been identified and it is likely that the cobalt is in solid solution within the pyrite (Payne, 1996c). The most noteworthy features are clasts and veins which can be used to distinguish three generations of mineralization. The oldest sulphides are in subrounded to subangular, 1 mm to 10 cm in diameter clasts composed of fine to coarse grained pyrite with minor dark grey cherty quartz. The clasts comprise up to 90% of the rock in some sections. A few red hematitic chert clasts up to 1 cm in diameter were also noted. The second phase is copper-rich consisting of pyrite, chalcopyrite, bornite and digenite in a clear quartz and calcite gangue. This phase forms a coarse grained matrix around the clasts. The youngest sulphides are found in up to 4 mm wide veinlets containing coarse chalcopyrite and bornite often with milky white quartz and lesser calcite. The quartz content in petrographic samples from the massive sulphide horizon averages about 15% but locally ranges up to 55%.

Trace element analysis indicates that the massive sulphide mineralization contains uncommonly low amounts of detrimental metals such as arsenic, antimony, mercury and selenium. Lead content is also low, averaging 49 ppm.

The upper and lower contacts of the massive sulphides are usually marked by 5 to 10 cm thick hematitic chert bands. The chert bands typically contain <10% pyrite with trace chalcopyrite and resemble the chert clasts observed within the massive sulphide horizon.

Along strike and downdip the massive sulphide horizon grades into hematitic chert bands. These distal chert bands occur at the same stratigraphic level and have sharp contacts with the adjacent wallrocks. Hole ID97-06 cut a section that appears to be a gradational facies between the massive sulphide and distal chert. It consists of hematitic chert with 30 to 40% laminated pyrite bands. A sample from this section averaged 1.23% copper, 0.14% zinc, 0.03% cobalt, 6.0 g/t silver and 0.27 g/t gold over 2.01 m. Other hematitic chert beds containing disseminated sulphides are thinner and returned lower copper assays.

Hematitic chert bands also occur in the hanging wall massive basalt ($MSBS_3$) on the eastern edge of the drill area. For example, Hole ID97-06 intersected a hematitic chert horizon 63.36 m above the interval described in the previous paragraph. This horizon averaged 1.07% over 0.19 m. These overlying hematitic chert bands may represent the distal facies of yet undiscovered massive sulphide horizons.

Stringer sulphide mineralization is developed within the footwall breccia basalt ($BRBS_2$) and to a lesser degree the overlying porphyritic basalt (PHBS). It is stratigraphically below the massive sulphide horizon but the two zones are separated by 10 to 30 m of barren basalts, except in Hole ID97-13 where the two zones are in contact. The stringer sulphide zone reaches a maximum thickness of 46.25 m in Hole ID97-01, with the best mineralized portion averaging 1.18% copper, 0.13% zinc, 0.04% cobalt, 2.8 g/t silver and 0.10 g/t gold over 17.06 m. Samples from the stringer sulphide zone usually grade between 0.3 to 1% copper with minor cobalt and low zinc and precious metals. The zone grades from massive quartz-pyrite-chalcopyrite

replacement mineralization in its core through quartz-pyrite-chalcopyrite stockwork veins to chlorite-pyrite veinlets on its fringes and at depth. Wallrocks within the stringer sulphide zone are intensely chloritized and often contain abundant disseminated to semi-massive specular hematite. The rocks are highly fractured and often brecciated with basalt fragments composing 20 to 80% of the zone. Wallrock fragments are usually subrounded to rounded and 5 to 10 cm in diameter.

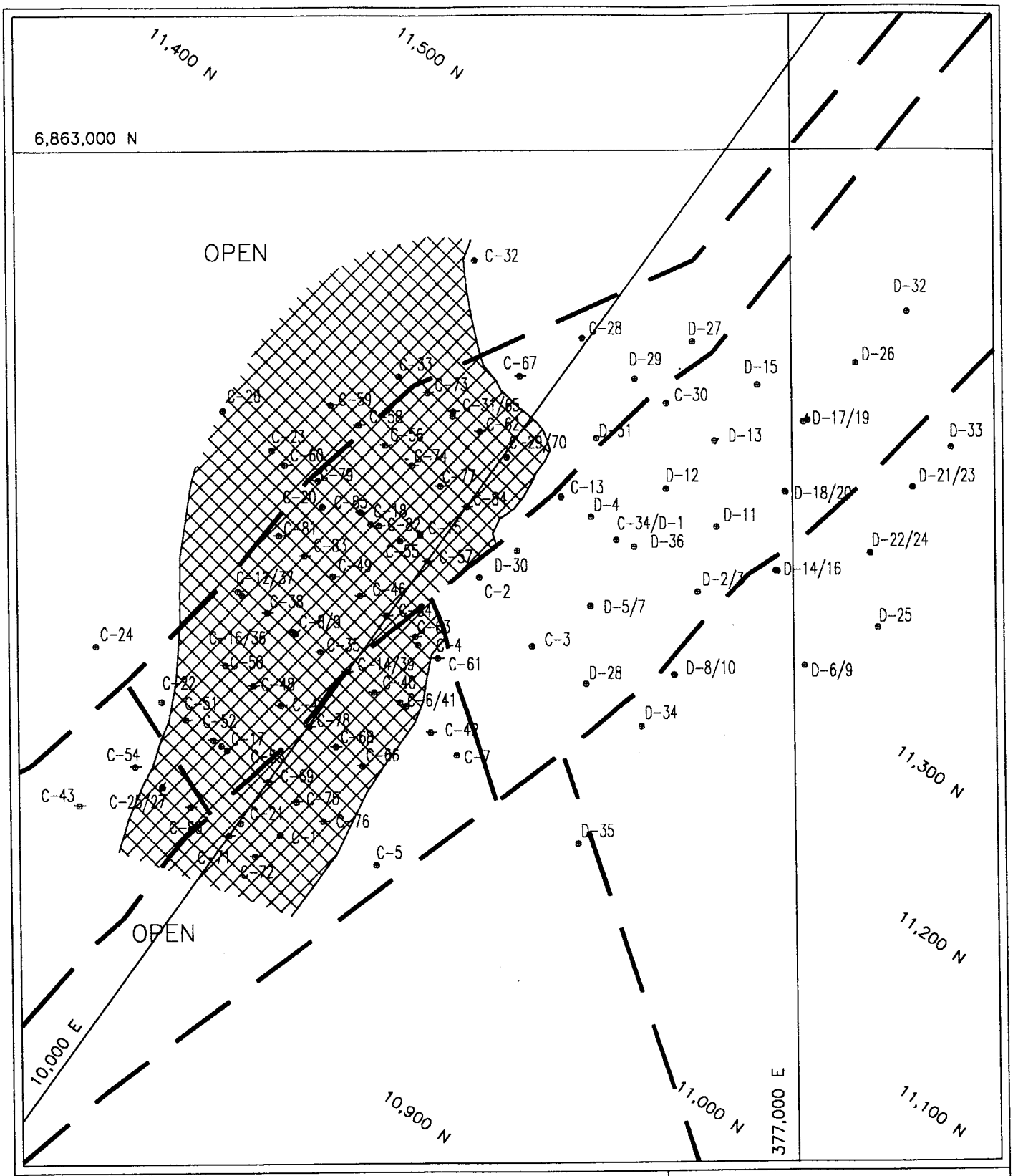
Based on crosscutting relationships four episodes of mineralization are observed in the stringer zone. The first episode produced irregular veins with dark maroon hematite, quartz and pyrite. This was followed by irregularly oriented, 5 to 10 cm wide veins containing coarse grained, bright yellow pyrite with small amounts of chalcopyrite. The third stage is the main copper mineralizing event. It produced quartz veins from 0.5 to 1.0 cm wide with minor dark yellow, fine grained pyrite and chalcopyrite. The last stage consists of quartz and chlorite in irregular, 1 to 1.5 cm wide veins that crosscut all previous episodes.

Secondary mineralization includes minerals which have wholly or partially replaced primary sulphide minerals and others which were precipitated in open fractures from groundwater. The most common secondary minerals are limonite, hematite, cuprite, malachite, azurite, black copper oxides, native copper and chalcocite. In some areas primary sulphide mineralization has been oxidized to form secondary minerals in situ. Elsewhere oxidation followed by leaching removed the copper in acidic groundwater leaving copper depleted limonite boxwork. When the acidic groundwater moved away from the oxidized source it was gradually neutralized by reaction with calcite in the basalt wallrocks which resulted in precipitation of cuprite, malachite, azurite,

black oxides or native copper depending upon chemical conditions at the site of precipitation. Occasionally the copper bearing groundwater encountered primary sulphide horizons and chalcocite was formed on the rims of the sulphide grains. Secondary mineralization is confined to the zone of near surface weathering which typically ranges between 5 and 50 m below surface but extends to more than 77 m along fractures in Hole IC97-56.

Groundwater transported, secondary mineralization occurs in basalt and chert units stratigraphically above and below units hosting the primary sulphide mineralization. The dispersion trains are often horizontally and vertically zoned with malachite and azurite on the margins and near surface, giving way to cuprite and native copper toward the centre and deeper in the system. The secondary copper minerals normally co-exist with orange-brown earthy limonite but toward the base of the zone native copper is found with dark red hematite. Native copper is the most difficult secondary mineral to log because it usually occurs as fine grains which form a black oxide coating within a day of being cored.

Significant secondary mineralization has been intersected in a zone that is 1000 m long and up to 500 m wide (Figure 36). Grades for predominantly fracture filling mineralization normally range between 0.3 and 1.5% copper with relatively low values for all other metals. In areas where the secondary mineralization overprints primary mineralization, grades are slightly higher at 1.5 and 2.5% copper with local enrichments up to 8.2%. Copper appears to be the only metal whose distribution is strongly affected by secondary remobilization.


11,400 N
11,500 N
6,863,000 N
OPEN
C-32
C-67
C-28
D-27
D-29
D-15
D-32
D-26
C-30
D-17/19
D-33
D-31
D-13
C-13
D-12
D-21/23
D-18/20
D-4
C-34/D-1
D-11
D-36
D-22/24
D-30
C-2
D-14/16
D-5/7
D-25
C-3
C-24
C-61
D-28
D-8/10
D-6/9
D-34
C-54
C-43
C-7
11,300 N
D-35
C-5
OPEN
11,200 N
10,000 E
10,900 N
11,000 N
377,000 E
11,100 N
Area of secondary copper zone
Fault
EXPATRIATE RESOURCES LTD.
FIGURE 36
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SECONDARY COPPER ZONE
ICE PROPERTY
0 100 200 300 400 500m
DRAWN/REVISED BY: TCB
PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-ZON1.DWG
DATE: May 11, 1998

Results from Outlying Geochemical Targets

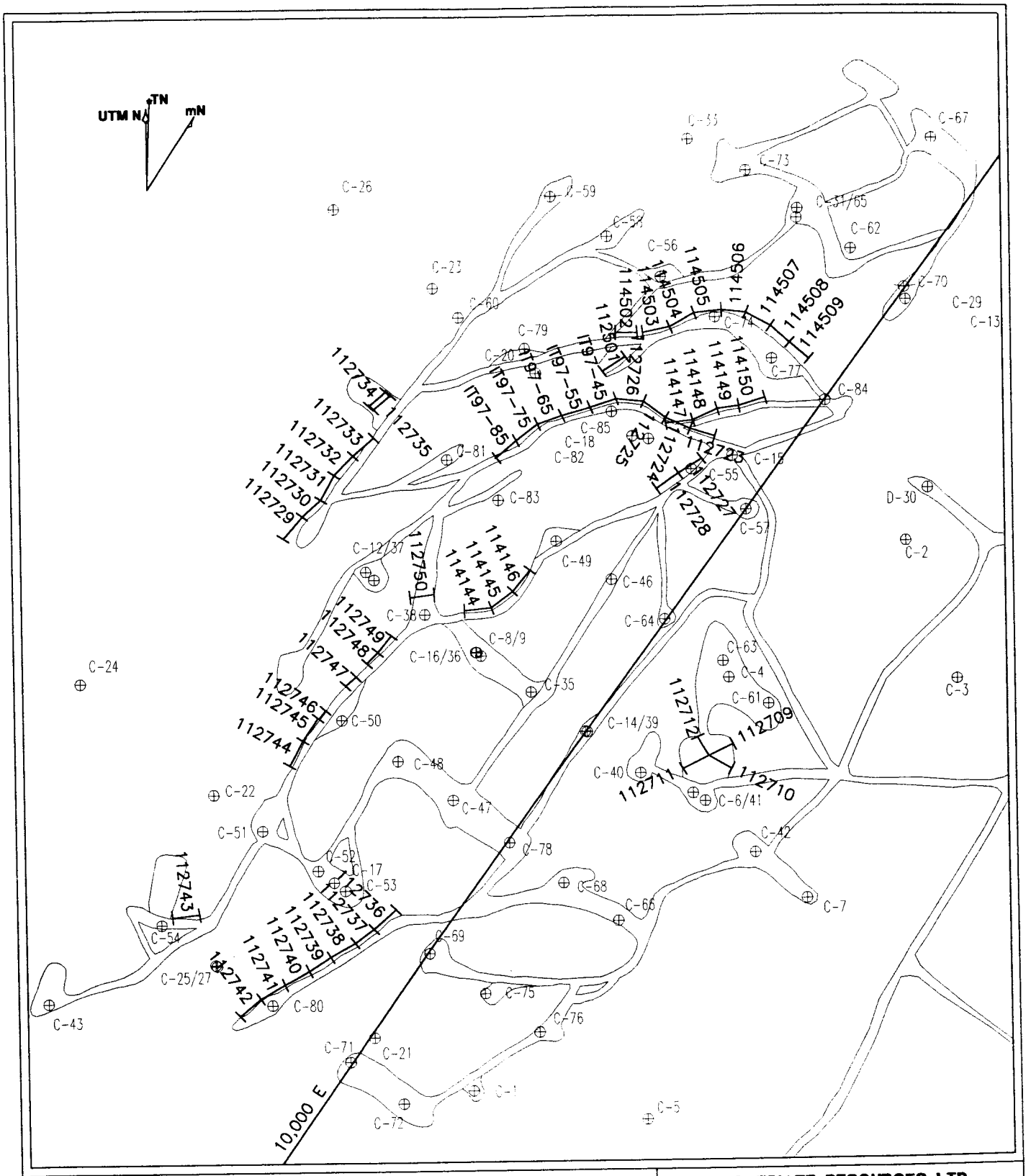
Five holes tested stratigraphy and geochemical anomalies south and west of the Ice Deposit. Two holes tested beneath a hydromorphically transported copper geochemical anomaly which extends southwest of the drill area along a strong gully paralleling the Baseline Fault. Both holes intersected barren massive basalt.

The other three holes were drilled west of the drill area to test copper geochemical anomalies located downhill from the stratigraphic contact between units $MSBS_1$ and $BRBS_1$. Drill Holes IC97-44 and IC97-45 crossed the favourable stratigraphic contact but no mineralization or alteration was intersected. Later hand pitting in this area determined that the anomalies are likely due to glacial dispersion.

ROAD CUT SAMPLING

During the 1997 exploration program 491.4 m of road cuts were chip sampled within the drill area (Figures 37 and 38). A total of 52 samples were collected from oxidized bedrock. Most were taken over 10 m intervals. All were sent to Chemex Labs where they were analyzed for 32 elements by the ICP technique and assayed for copper. Certificates of Analysis are in Appendix VI.

Copper assays range from 0.09 to 3.79% and arithmetically average 0.47%. The road cut samples usually returned comparable results to those obtained in the uppermost samples from adjacent drill holes but in some areas the road cut assays were much higher. The areas where road cut assays exceed drill results are usually highly fractured and it is unlikely that drilling could have cored this material.



112743 Trench, with sample number

Road

C-53 Diamond drill hole

EXPATRIATE RESOURCES LTD.

FIGURE 37

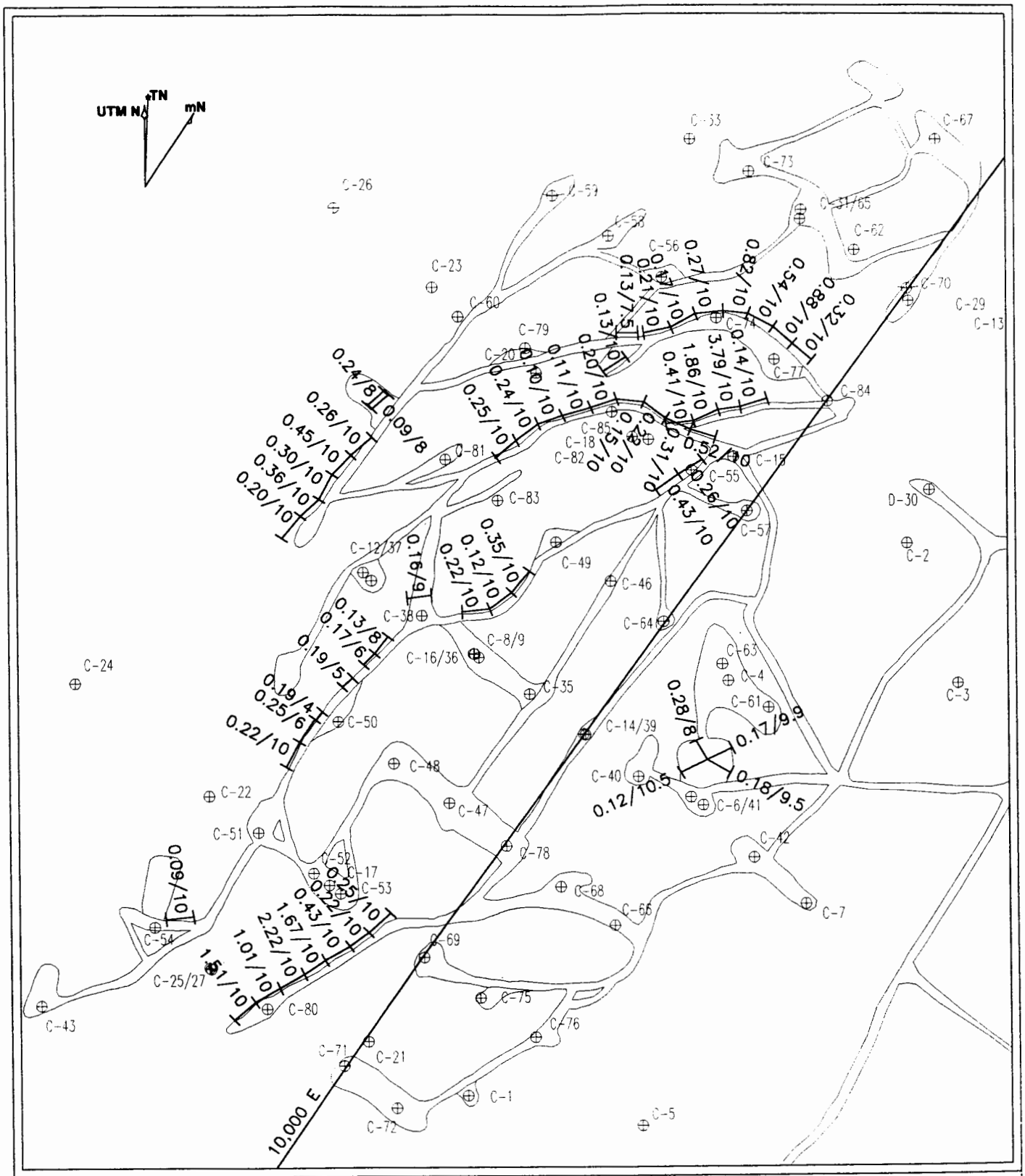
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CHIP SAMPLE LOCATIONS

ICE PROPERTY

0 20 40 60 80 100m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-CHIPS.DWG	DATE: May 11, 1998



I 0.13/5 Trench, with copper value in %/m

Road

C-53 Diamond drill hole

EXPATRIATE RESOURCES LTD.

FIGURE 38

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CHIP SAMPLE COPPER VALUES

ICE PROPERTY

0 20 40 60 80 100m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-CHIPS.DWG	DATE: May 11, 1998

CONCLUSIONS AND RECOMMENDATIONS

Although the Ice Deposit is likely to be too small and low grade to justify a stand-alone operation, there is good potential for additional discoveries elsewhere on the property. Based on the metal signature and its relationship between the mineralization and the enclosing basaltic wallrocks, the deposit is categorized as Cyprus-type volcanogenic massive sulphide (Franklin, 1996). This type of mineralization forms along fissure zones in active spreading centres and is found where ocean floor has been obducted. The classic type deposits are in the eastern Mediterranean while some of the best Canadian examples are located in Newfoundland. Most of the Cyprus-type deposits are smaller and lower grade than the Ice Deposit but some are much larger and richer, such as the Mavrovouni Deposit in Cyprus which produced 15 million tonnes grading 4% copper (Galley and Koski, 1997). These deposits often occur in clusters; for example, the 70 km long belt of pillow basalts on the northern coast of Cyprus contains about 70 VMS occurrences.

Mineralization in Cyprus-type deposits can be confined to a single lens but often occurs as a string of lenses along an elongate fissure zone. Volcanism within spreading centres is usually intermittent and fissures are often reactivated, producing mineralized horizons at more than one stratigraphic level. Tectonic activity coupled with volcanism typically results in rapid facies changes.

Fortunately rocks in the vicinity of the Ice Deposit are not highly deformed so it is possible to identify significant depositional features and alteration zones associated with the massive sulphides and feeder system. The horizon which hosts the massive sulphide mineralization occurs at a significant stratigraphic break which has been traced by diamond drilling and outcrops for a strike length of over 1000 m. There are indications of other intervolcanic horizons (marked by hematitic chert horizons containing weak copper mineralization) with potential to host additional massive sulphide lenses. The underlying stringer sulphide zone and accompanying wallrock alteration are consistent with the Cyprus-type model. Recognition of similar features elsewhere on the property may lead to discovery of additional massive sulphide lenses.

The physical and chemical characteristics of the massive sulphide mineralization are exceptionally favourable when compared to those of other VMS deposits. The coarse grain size, presence of high grade copper minerals and absence of detrimental metals should mean that a clean, high value concentrate can be produced. The potential value of by-products such as gold, silver, zinc and cobalt cannot be determined until metallurgical tests are performed. The dip of mineralization relative to the overlying hillside indicates that at least part of the zone is suitable for open pit mining while the thickness of the zone, coupled with competent wallrock, suggests that relatively low cost underground mining could be conducted if required.

The zone of secondary copper mineralization is amenable to open pit mining and should be recoverable using solvent extraction electrowinning. Metallurgical testing will be required to determine acid consumption and copper recovery.

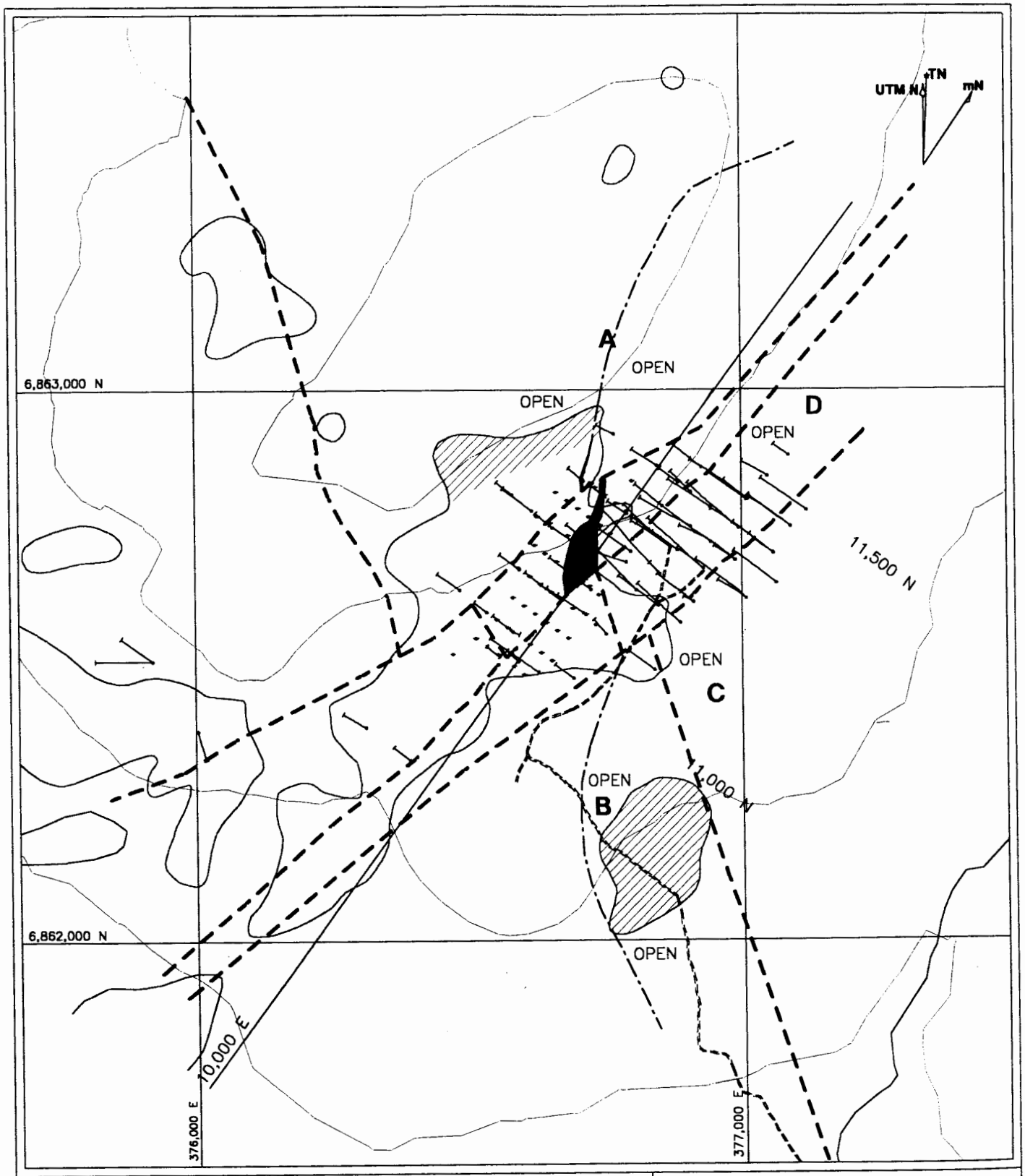
Future work should consist of a test Induced Polarization survey over the Ice Deposit to determine whether or not this technique can detect buried massive sulphide and stringer zone mineralization. If this geophysical technique is successful, the survey coverage should be extended along strike to the north and down dip to the east. If the geophysical survey produces a strong response over the deposit, similar anomalies elsewhere on this grid should be high priority drill targets. The geophysical work should be done in conjunction with continued geological mapping, prospecting and soil sampling on targets elsewhere on the property.

Future diamond drilling should be performed in four areas adjacent to the Ice Deposit as shown on Figure 39. The highest priority target (A) lies immediately northwest of the drill area along the favourable contact at the base of unit $MSBS_3$. The second area (B) lies 300 m south of the drill area where an untested soil geochemical anomaly is located downslope from the favourable contact. The other areas are blind targets southeast (C) and northeast (D) of the drill area where the massive sulphide horizons and stringer zone mineralization could exist beneath cover rocks. Of the latter two, the southeasterly target likely has more potential because of its proximity to the north-northwest trending fault that may be a synvolcanic growth fault along which mineralization may be localized.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

T.C. Becker, B.Sc., P.Geo.



100 ppm copper contour

Untested geochemical anomaly

Massive sulphides

Favourable contact for massive sulphides

Cat road

Diamond drill hole

Fault

EXPATRIATE RESOURCES LTD.

FIGURE 39

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

EXPLORATION POTENTIAL DRILL AREA

ICE PROPERTY

0 100 200 300 400 500m

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-EXP.DWG	DATE: May 11, 1998

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W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

1250 m

1200 m

1150 m

1100 m

1050 m

BRBS

RBCH

BRBS

RBCH

MSBS

IC97-54

IC96-25

IC96-27

IC96-21

IC97-71

IC97-72

IC96-01

IC96-01
188.66

IC96-21
46.18

IC96-27
46.33

IC97-54
34.14

IC96-25
31.82

IC97-86
26.82

IC97-73
25.21

IC97-72
27.43

UTM N.J. 4TH 7TH

~~ Fault

— — Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

IC97-54

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 18
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 10,950N

ICE PROPERTY

0 10 20 30 40 50m

Dwg 9

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD\S\IC-S-095.DWG	DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

1250 m

1200 m

1150 m

1100 m

1050 m

RBCH

MSBS

BRBS

PHBS

BRBS

PHBS

PHBS

BRBS

MSBS

RBCH

IC96-24

IC96-22

IC96-17

IC97-51

IC97-52

IC97-53

IC97-69

IC97-75

IC97-76

IC96-25

IC96-24

IC96-22 44.50

IC96-17 64.62

IC97-51 29.57

IC97-52 36.58

IC97-53 37.19

IC97-69 21.39

IC97-75 31.89

IC97-76 21.09

IC96-25 64.63

UTM N

~~ Fault

—— Contact

Diamond drill hole with hole number

analysis
assay – Cu %
ICP – Cu ppm

IC97-34

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 19

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,000N

ICE PROPERTY

0 10 20 30 40 50m

Dwg 8

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-100.DWG	DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

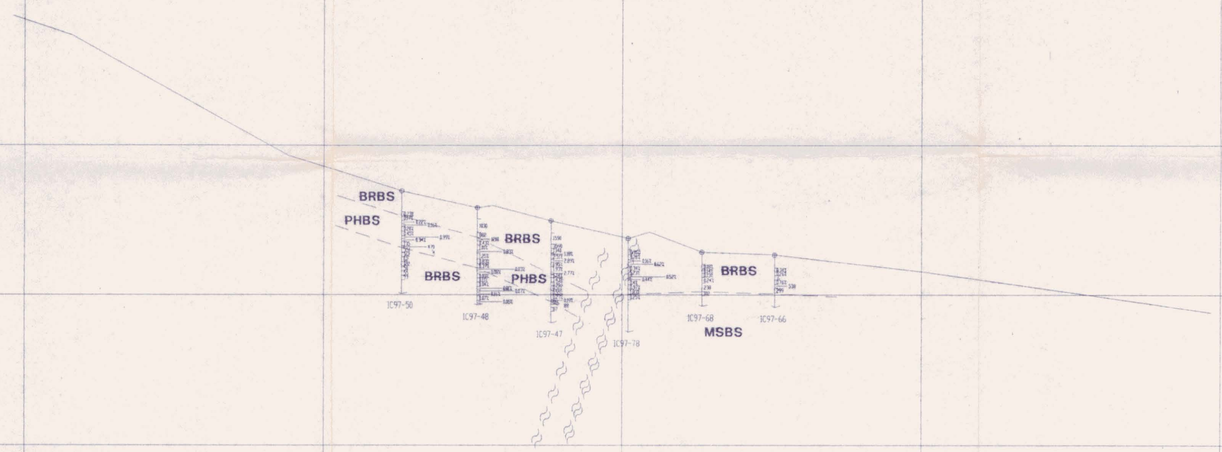
1250 m

1200 m

1150 m

1100 m

1050 m



IC97-50 3434 | IC97-48 3231 | IC97-47 3383 | IC97-78 3409 | IC97-68 1798 | IC97-66 1737

UTM-NAD 27N TRUE NORTH

~~ Fault

—— Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

IC97-34

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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Expatriate Resources Ltd.

FIGURE 20
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,050N

ICE PROPERTY

0 10 20 30 40 50m

Data 7

DRAWN/REVISED BY: TCB | PROJECT: FP

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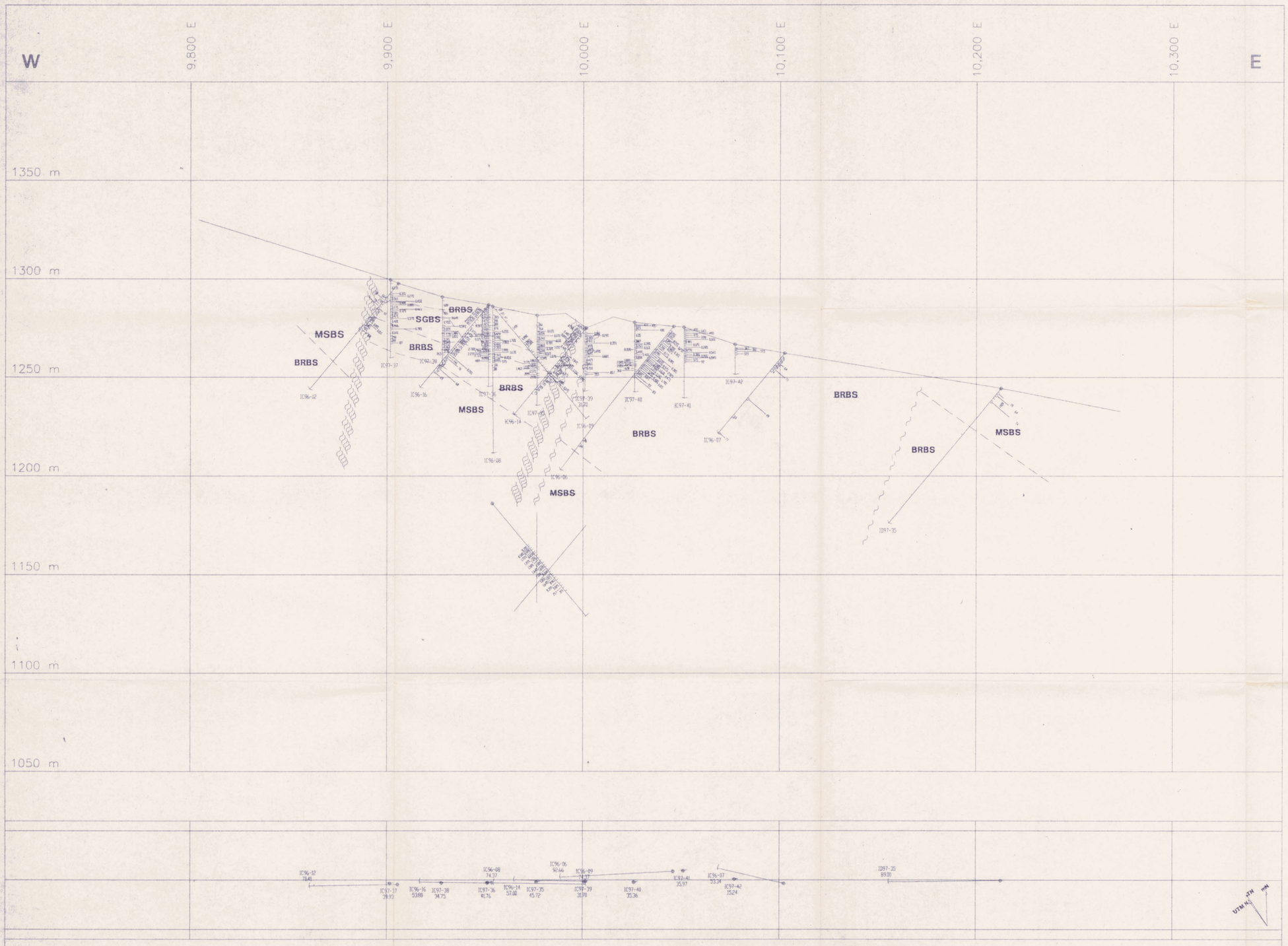
W
9,800 E
9,900 E
10,000 E
10,100 E
10,200 E
10,300 E
E
1350 m
1300 m
1250 m
1200 m
1150 m
1100 m
1050 m
MSBS
BRBS
SGBS
BRBS
BRBS
MSBS
BRBS
MSBS
BRBS
BRBS
MSBS
1097-35
IC96-12
IC97-37
IC92-28
IC96-16
IC97-36
IC96-14
IC97-35
IC96-08
IC96-06
IC96-09
IC97-39
3170
IC97-40
IC97-41
IC92-41
IC96-07
IC97-42
IC96-10
IC96-11
IC96-13
IC96-17
IC96-18
IC96-19
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IC96-21
IC96-22
IC96-23
IC96-24
IC96-25
IC96-26
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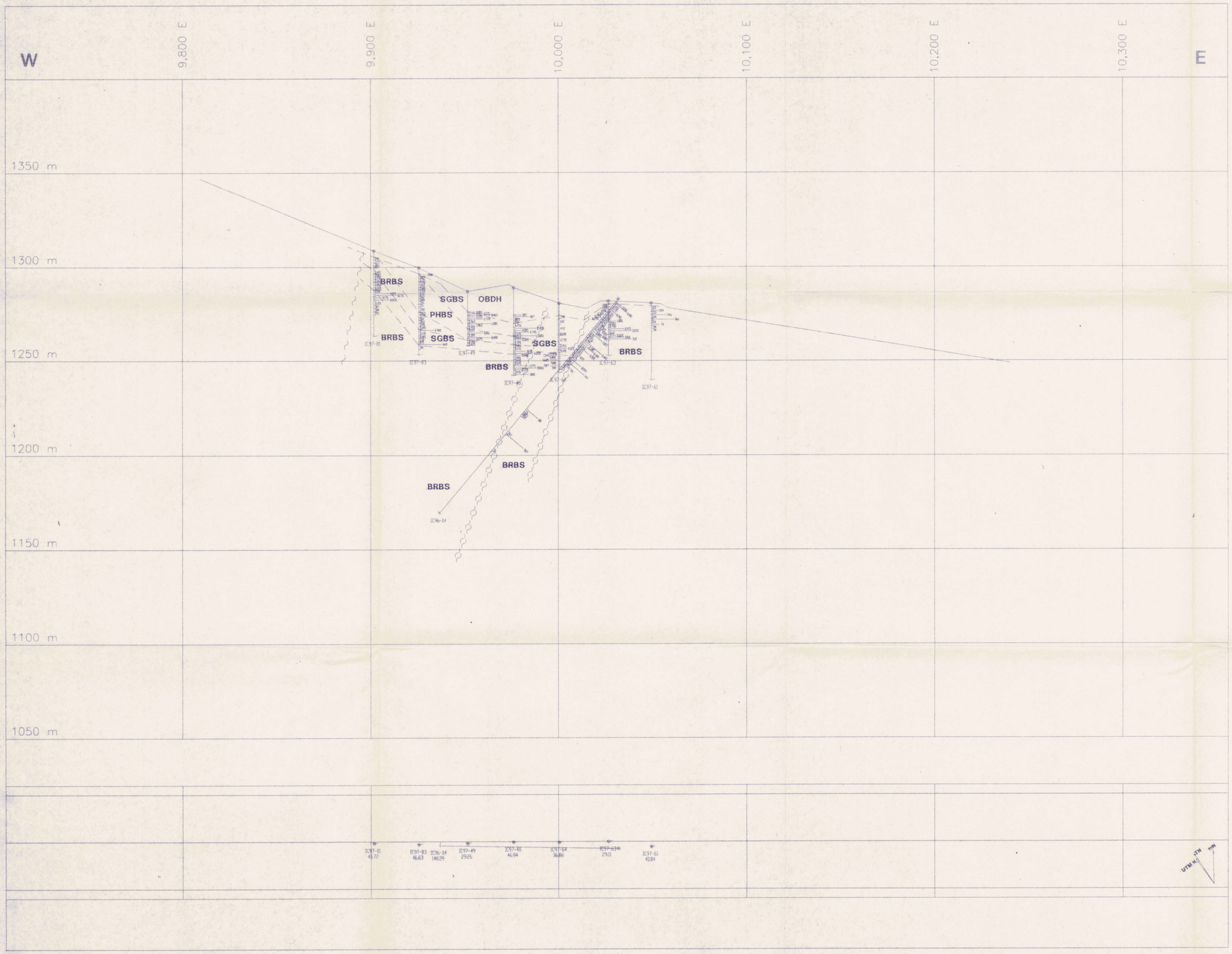
IC96-56



Fault

Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

IC97-34

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 22
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,150N

ICE PROPERTY

0 10 20 30 40 50m

DWG (2)

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-115.DWG	DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

1250 m

1200 m

1150 m

1100 m

1050 m

MSBS

BRBS

PYMS

BRBS

MSBS

BRBS

PHBS

BRBS

SGBS

BRBS

MSBS

BRBS

PYMS

PHBS

MSBS

BRBS

BRBS

MSBS

PHBS

MSBS

BRBS

BRBS

MSBS

BRBS

SGBS

BRBS

SGBS

BRBS

IC96-26

IC96-23

IC96-20

IC97-60

IC96-18

IC96-15

IC97-79

IC97-85

IC97-82

IC97-55

IC97-57

IC96-82

IC96-83

IC97-28

IC97-34

IC96-26 56.39

IC96-23 104.85

IC96-20 62.1

IC97-60 53.64

IC96-18 77.42

IC96-15 89.55

IC97-79 49.99

IC97-85 43.28

IC97-82 46.33

IC97-55 35.97

IC96-82 116.13

IC96-83 152.40

IC97-57 41.76

IC97-28 142.69

IC97-34 168.55

UTM NAD 27N

~~ Fault

—— Contact

Diamond drill hole with hole number
analysis
assay - Cu %
ICP - Cu ppm

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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Expatriate Resources Ltd.

FIGURE 23

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,200N

ICE PROPERTY

0 10 20 30 40 50m

Dwn (S)

DRAWN/REVISED BY: TCB

PROJECT: FP

FILE: C:\FP\ICE\ACADJ\IC-S-120.DWG

DATE: May 11, 1998

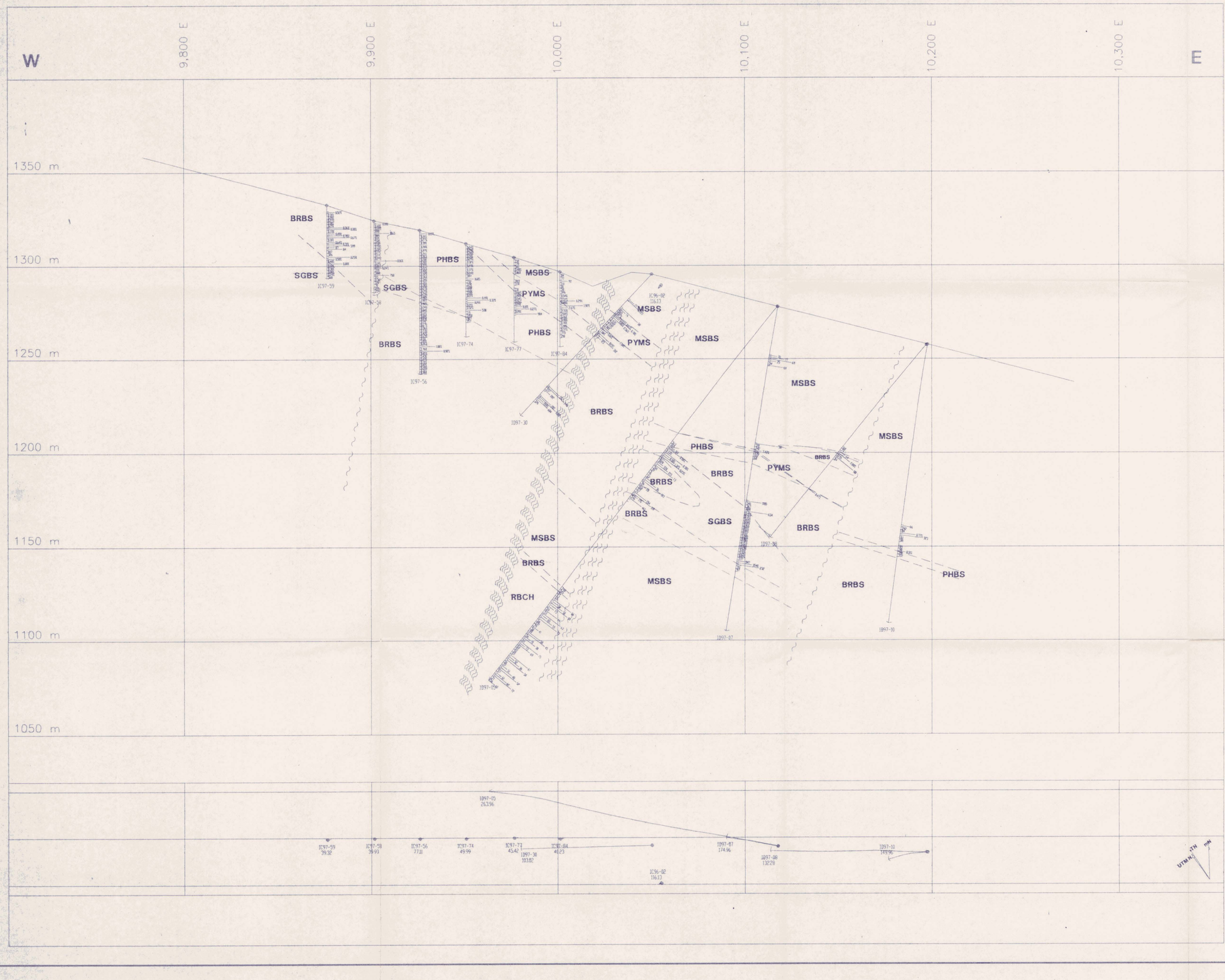

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FIGURE 24
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,250N

ICE PROPERTY

0 10 20 30 40 50m

Dwg (4)

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-125.DWG	DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

1250 m

1200 m

1150 m

1100 m

1050 m

MSBS

PHBS

BRBS

PYMS

SGBS

RBCH

IC97-73

IC97-86

IC97-78

IC97-62

IC96-13

IC97-94

IC96-34

IC97-36

IC97-82

IC97-08

IC97-02

IC97-03

IC97-06

IC97-09

IC97-05

IC96-33 56.98

IC96-30 61.57

IC97-73 32.92

IC97-86 33.22

IC96-29 65.84

IC97-62 86.47

IC97-78 49.53

IC96-13 98.96

IC97-36 175.49

IC97-94 98.45

IC96-34 114.91

IC97-08 173.13

IC97-82 210.01

IC97-03 178.00

IC97-06 188.67

IC97-09 186.34

IC97-05 263.96

~~ Fault

— — Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

UTM N

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FIGURE 25

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

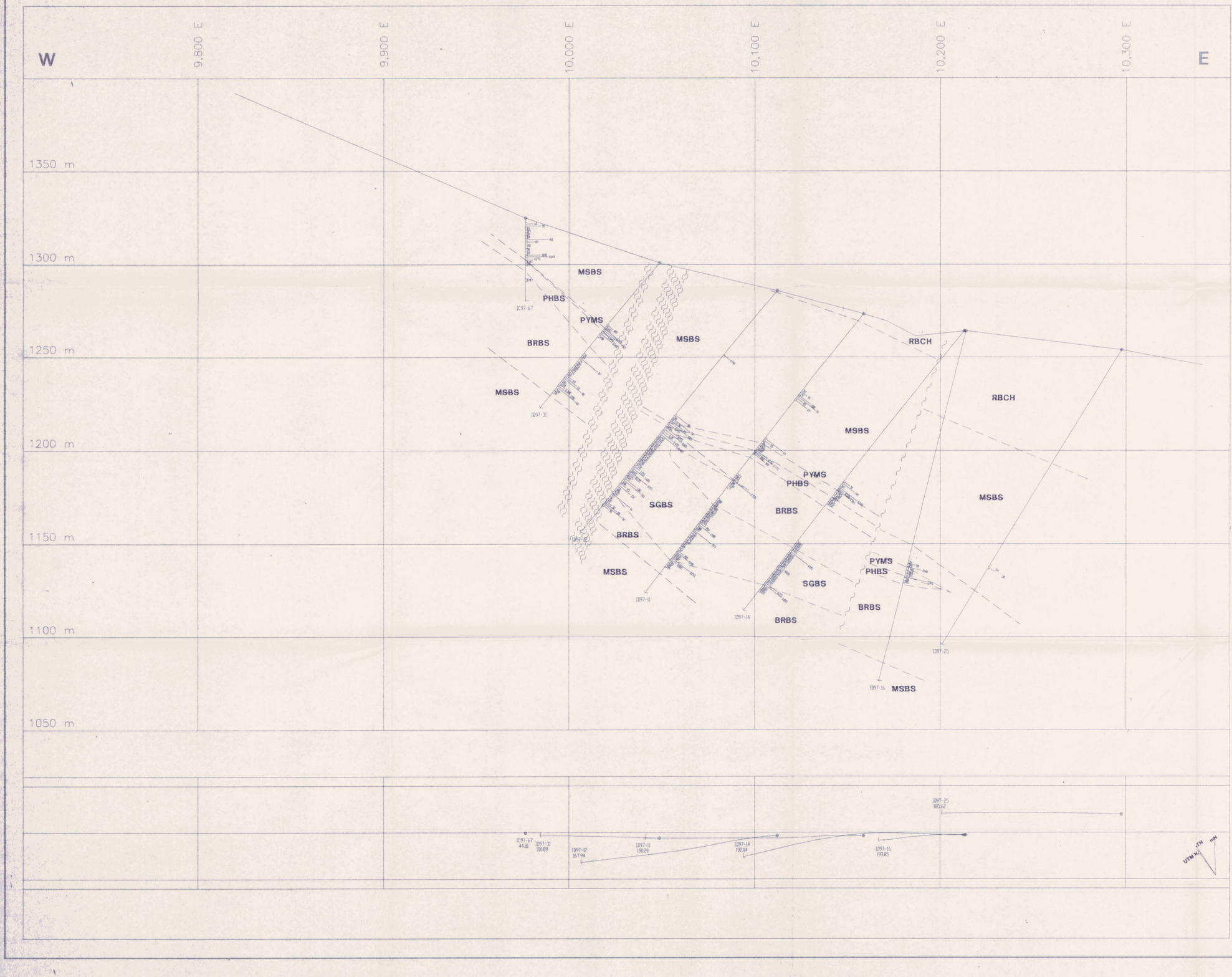
SECTION 11,300N

ICE PROPERTY

0 10 20 30 40 50m

Dwh 3

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-130.DWG	DATE: May 11, 1998



Fault

Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 26
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,350N

ICE PROPERTY

0 10 20 30 40 50m

Dwg 10

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-135.DWG	DATE: May 11, 1998

W

9,800 E | 9,900 E | 10,000 E | 10,100 E | 10,200 E | 10,300 E

E

1350 m
1300 m
1250 m
1200 m
1150 m
1100 m
1050 m

MSBS
BRBS
PHBS
RBCH
SGBS
PYMS

IC96-32
IC96-28
IC97-29
IC96-30
IC97-13
IC97-18
IC97-26
IC97-22
IC97-24

IC96-32 55.47
IC96-28 83.94
IC97-29 93.09
IC96-30 82.28
IC97-13 149.85
IC97-18 178.21
IC97-26 156.97
IC97-22 146.38
IC97-24 159.41

UTM NAD 83 TM

Fault
Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

IC97-34

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 27
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,400N

ICE PROPERTY

0 10 20 30 40 50m

Dwg 11

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FILE: C:\FP\ICE\ACAD3\IC-S-140.DWG | DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

1250 m

1200 m

1150 m

1100 m

1050 m

MSBS

BRBS

MSBS

RBCH

MSBS

RBCH

MSBS

BRBS

PHBS

PYMS

BRBS

MSBS

MSBS

BRBS

BRBS

1097-27

1097-15

1097-17

1097-19

1097-21

1097-23

1097-34

1097-15
127.71

1097-17
132.28

1097-27
110.03

1097-19
178.00

1097-21
155.45

1097-23
271.73

UTM N.

TN

MN

~~ Fault

— — Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 28
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,450N

ICE PROPERTY

0 10 20 30 40 50m

Dwg 12

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-145.DWG	DATE: May 11, 1998

W

9,800 E

9,900 E

10,000 E

10,100 E

10,200 E

10,300 E

E

1350 m

1300 m

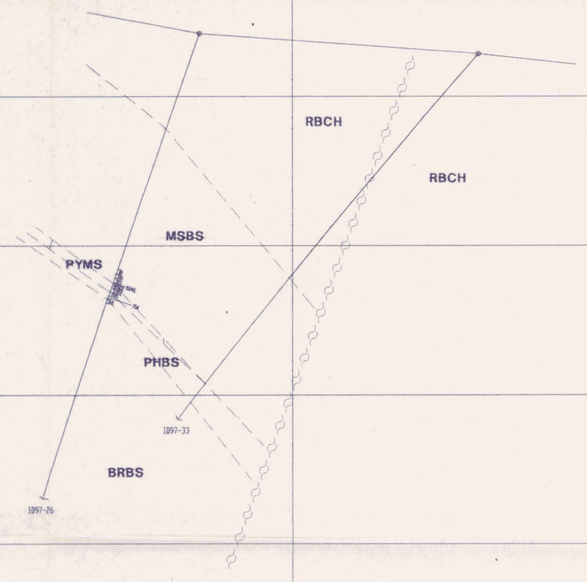
1250 m

1200 m

1150 m

1100 m

1050 m



~~ Fault

— — Contact

Diamond drill hole with hole number
analysis
assay – Cu %
ICP – Cu ppm

1997-34

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

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FIGURE 29
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 11,500N

ICE PROPERTY

0 10 20 30 40 50m

DWG (B)

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: C:\FP\ICE\ACAD3\IC-S-150.DWG	DATE: May 11, 1998

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FIGURE 30

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

1150 m LEVEL PLAN

ICE PROPERTY

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SCALE 1:1000

0 10 20 30 40 50m

DWN 17

DRAWN/REVISED BY: TCB	PROJECT: FP
FILE: c:\fp\ice\acad3\ic-l-115.dwg	DATE: May 11, 1998

Drill hole extends past level plan

Drill hole pierces plane of level plan

IC97-62 Drill hole collar with name

Fault

Contact

Edge of slope

MSBS Massive basalt
PHBS Porphyritic basalt
BRBS Breccia basalt
PYMS Massive sulphide
SGBS Stringer sulphide
RBCH Ribbon chert

ID97-27 ID97-32 ID97-15 ID97-26 ID97-17 ID97-31 ID97-13 ID97-19 ID97-33 ID97-12 ID97-18 ID97-21 ID97-23 IC96-15 ID97-30 ID97-04 ID97-11 ID97-36 ID97-20 IC96-34 ID97-01 ID97-22 ID97-14 ID97-24 ID97-05 ID97-02 IC96-02 ID97-16 ID97-03 IC96-03 IC96-04 ID97-07 ID97-25 ID97-06 IC96-08 ID97-28 ID97-09 ID97-08 IC96-06 ID97-10 ID97-34 IC96-17 IC96-07 IC96-25 IC96-21 IC96-01 IC96-05 ID97-35

BRBS PHBS PYMS MSBS RBCH SGBS

11,550 11,500 11,450 11,400 11,350 11,300 11,250 11,200 11,150 11,100 11,050 11,000 10,950 10,000 E

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FIGURE 31

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

1200 m LEVEL PLAN

ICE PROPERTY 093E 3/5

SCALE 1:1000

0 10 20 30 40 50m

DWG 16

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FILE: c:\fp\ice\acad3\ic-l-120.dwg | DATE: May 11, 1998

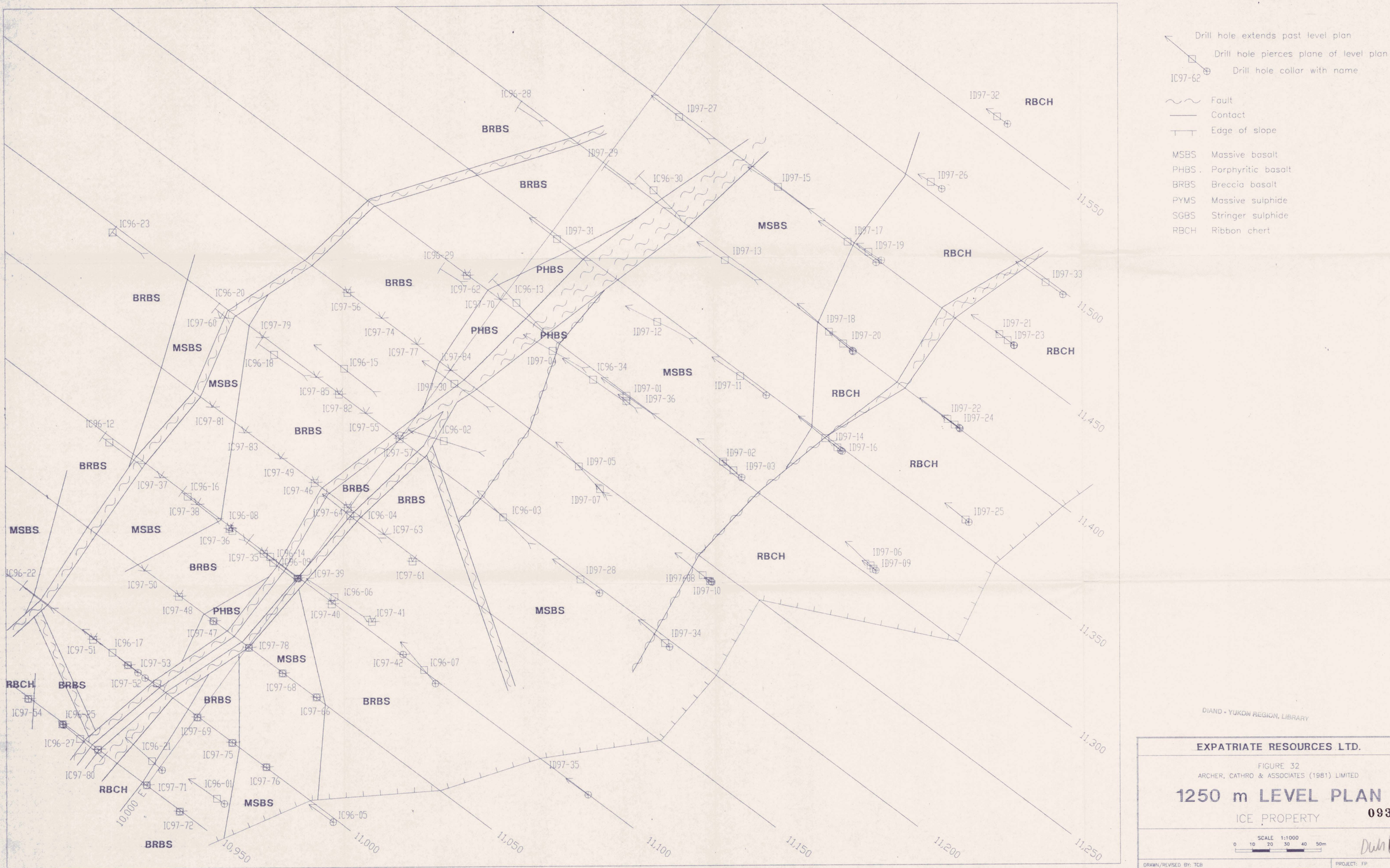

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FIGURE 32

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

1250 m LEVEL PLAN

ICE PROPERTY

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SCALE 1:1000

0 10 20 30 40 50m

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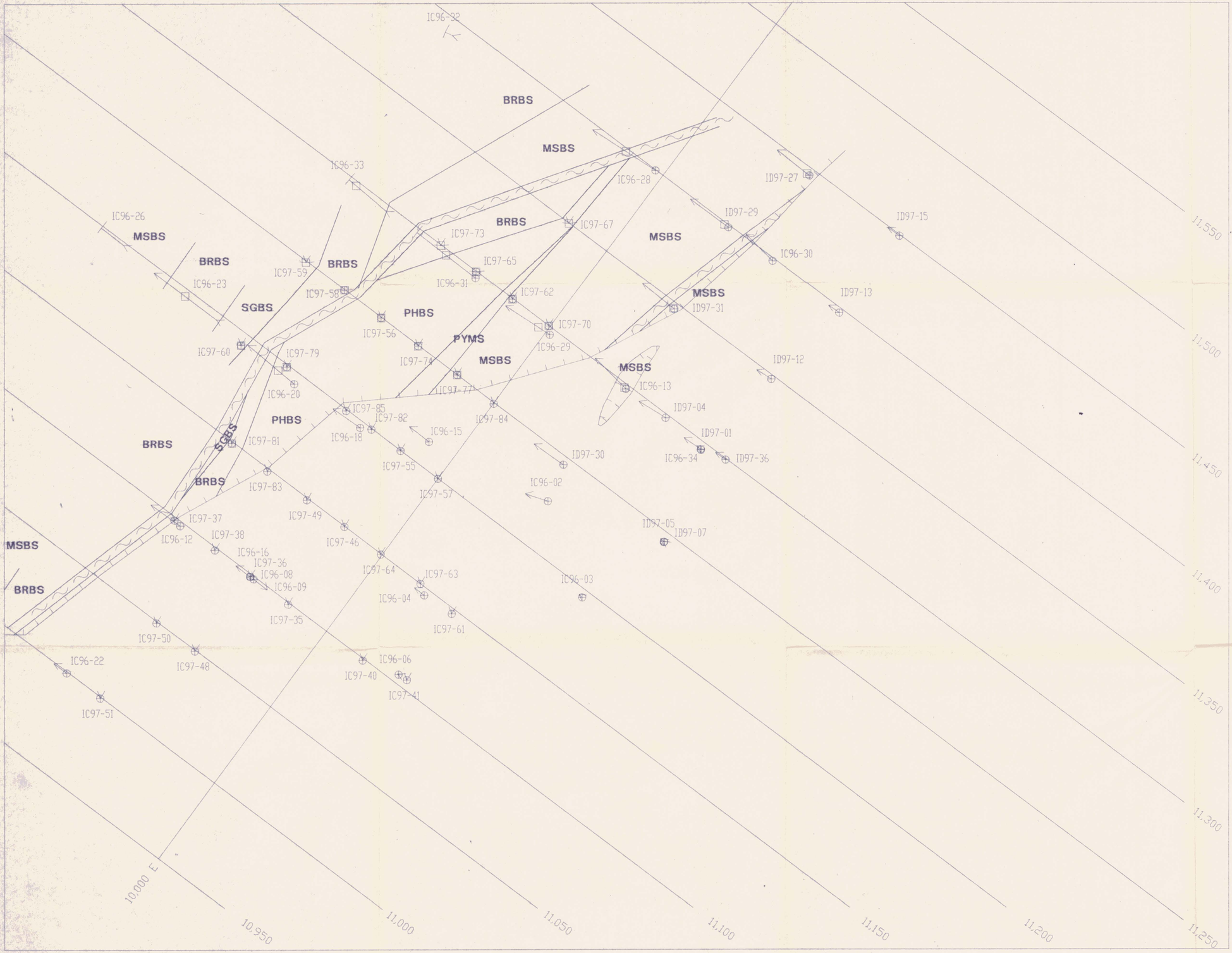
PROJECT: FP

FILE: c:\fp\ice\acad3\ic-l-125.dwg

DATE: May 11, 1998



Drill hole extends past level plan

Drill hole pierces plane of level plan

IC97-62 Drill hole collar with name

Fault

Contact

Edge of slope

MSBS	Massive basalt
PHBS	Porphyritic basalt
BRBS	Breccia basalt
PYMS	Massive sulphide
SGBS	Stringer sulphide
RBCH	Ribbon chert

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FIGURE 33

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

1300 m LEVEL PLAN

ICE PROPERTY

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SCALE 1:1000

0 10 20 30 40 50m

Dwh 14

DRAWN/REVISED BY: TCB

PROJECT: FP

FILE: c:\fp\ice\acad3\ic-i-130.dwg

DATE: May 11, 1998

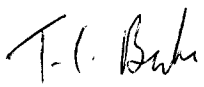
APPENDIX I

AUTHOR'S STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Thomas C. Becker, geologist, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address in Port Moody, British Columbia, do hereby certify that:

1. I graduated from the University of Alberta in 1989 with a B.Sc. (Honours) in Geological Sciences.
2. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia in the Province of British Columbia (registration number 20021).
3. I have been actively involved in mineral exploration in the Northern Cordillera since 1984.
4. I have personally participated in or supervised the field work reported herein.



Thomas C. Becker, B.Sc., P.Geo.

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APPENDIX II

SUMMARY OF ENVIRONMENTAL DATA

FOR ICE MINERAL PROPERTY

Summary of Environmental Data

For

Ice Mineral Property

for

EXPATRIATE RESOURCES LTD.

October 1997

J. Gibson & Associates

Whitehorse, Yukon

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Introduction

J. Gibson and Associates were contracted by Expatriate Resources Ltd. to conduct baseline environmental surveys of the surface waters draining the Ice Deposit in the Finlayson Lake area of the Yukon Territory.

Baseline surveys were started in May 1997 with installation of hydrology, water quality and climate stations. Surveys continued throughout the summer with site visits in July and September 1997.

The following report is a summary of all hydrology, water quality and climate data collected in 1997.

Study Area

The Ice deposit (volcanogenic massive sulphides) is located in the Finlayson Lake area of the Yukon. The site is accessed by helicopter is 17km North from the Mink Creek airstrip at Km 292 of the Robert Campbell Highway.

The area under study is a small (less than 100 square kilometers) tributary drainage to the Pelly River. The area is drained by "Ice" Creek (Figure 1) which has lakefed headwaters near the Ice Deposit. A number of smaller side drainages fed by lake storages contribute to Ice Creek flows.

Local topography has generally medium relief near stream headwaters with decreasing relief and stream gradients as you move downstream into the Pelly River Valley.

Ice Creek has numerous instream lakes and marshes between the deposit and the Pelly River.

Data Stations

Eight Water **quality** stations (Figure 1) were established in May 1997:

Ice 1. Ice Creek immediately downstream of the deposit.

Ice 2. Tributary to Ice Creek to the east of the mineral deposit.
Tributary is lake / marsh fed and flows East.

Ice 3. Tributary to Ice Creek to the West of the mineral deposit.
Tributary is lake fed and flows south to a confluence with Ice Creek downstream of station Ice 1.

Ice 4. Ice Creek approximately 8 km downstream of station Ice 1.
Station is located upstream of a secondary tributary entering Ice Creek from the West.

Ice 5. Ice Creek upstream of it's confluence with the Pelly River. Station is located on a river bench before Ice Creek enters the immediate Pelly River valley.

Ice 6. Pelly River 1 km upstream of mouth of Ice Creek.

Ice 7. Pelly River 1 km downstream of mouth of Ice Creek.

Ice 8. Intermittent tributary cutting west across the Ice Deposit's south facing slope.

Hydrology data collection was done at three main stations along Ice Creek:

Ice 1. Water level data logger and staff gauge.

Ice 4. Staff Gauge.

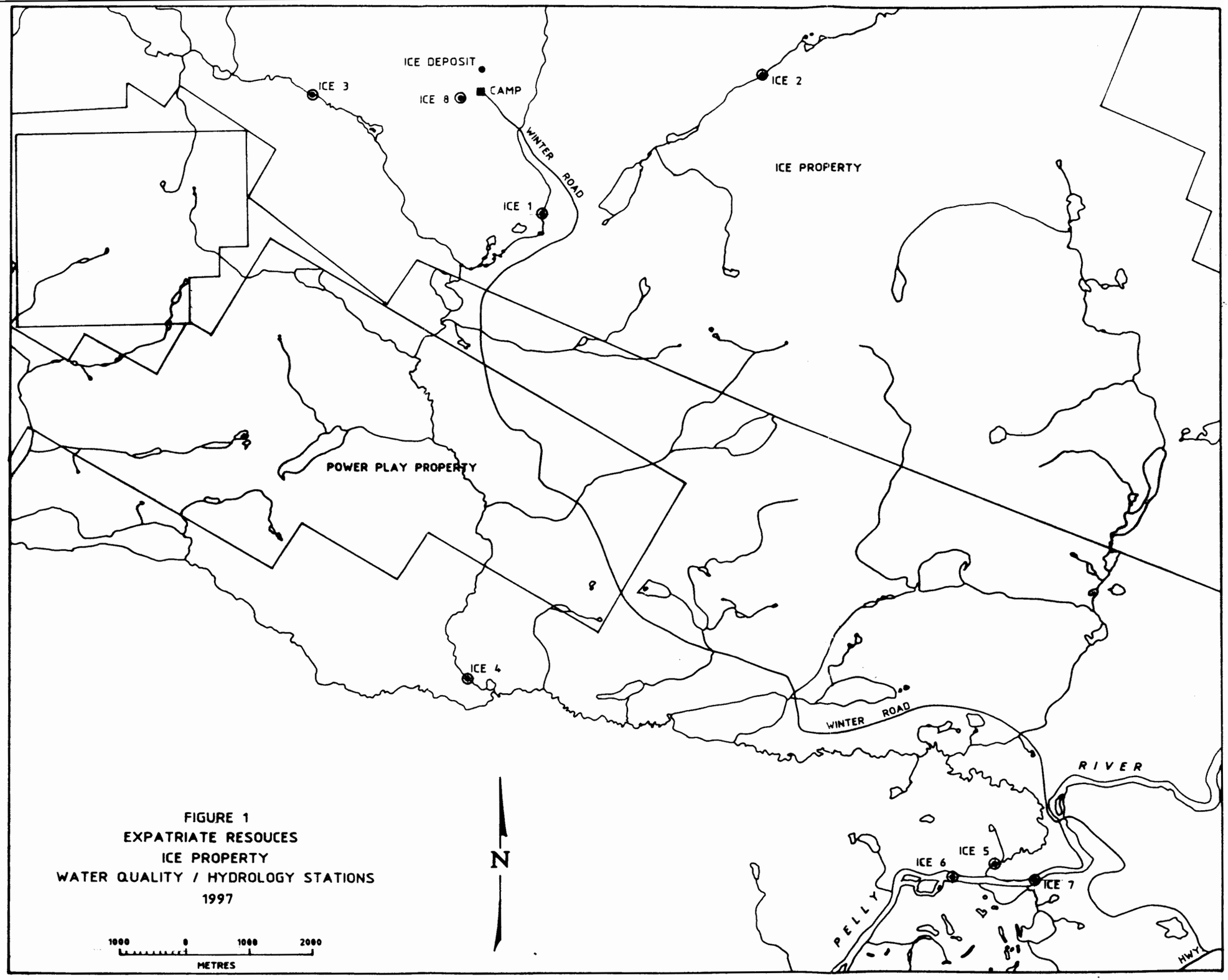
Ice 5. Staff gauge.

Flow volume measurements were taken at all six Ice Creek stations in conjunctions with water quality sampling.

No flow measurements were taken of the Pelly River.

A **climate** station for twice daily measurement of precipitation and temperature (maximum, minimum) was established at the Ice Deposit camp. Camp staff recorded data from May 23 to September 30, 1997.

Figure 1. Ice Property 1997 Site Location Map



Analysis Parameters

All water quality stations were sampled and analyzed for:

Routine Chemistry	–	Total alkalinity as (CaC03), conductivity, pH, turbidity, suspended solids, dissolved solids, nitrate, nitrite, sulfate, ammonia, total reactive phosphorus and total hardness
Cyanide (SAD)		
Dissolved Metals	–	31 element ICP Scan
Total Metals	–	31 element ICP scan

Dissolved metals samples were field filtered using Nalgen 60cc Luer-Loc syringes with 45 micron filters.

Total and dissolved metal samples were preserved immediately after filling with nitric acid (0.5 ml acit : 100 ml sample). Samples for cyanide analysis were preserved with sodium hydroxide (NaOH) already in the bottles supplied by the laboratory.

All samples were kept at or near 4 Celsius during transport to Whitehorse and shipping by express air cargo to the Vancouver laboratory.

During water quality sampling, each site had "insitu" pH, conductivity, dissolved oxygen and water temperature measurements taken with an ICM Multimeter and an Oakton TempTestr.

Streamflow volume measurements were taken with a Price Velocity Meter. All laboratory analysis was done by Norwest Labs, accredited by the Canadian Association of Environmental Analytical Laboratories (CAEAL), and the Standards Council of Canada (SCC).

Norwest Labs is also registered in the B.C. Ministry of Environment Laboratory Registration Program.

Results

Hydrology

A Stevens Water Level Data Logger and staff gauge were established at Station Ice 1 on May 23, 1997. The logger was calibrated to the staff gauge and programmed to taken water level measurements at one hour intervals. A complete record of measurements from May 23 to September 17 was obtained.

Streamflow volumes were measured on four occasions at Ice 1. Stations Ice 4 and Ice 5 had staff gauges installed on May 23, 1997. During each of three site visits, streamflow volumes were measured against the staff gauge reading.

All three hydrology sites had staff gauge "zero" surveyed to two benchmarks.

Results of all flow measurements and staff gauge readings are listed in Table 1.

Flow measurements and staff gauge heights at Station Ice 1 were used to develop a stage discharge table (Table 2). The table is considered preliminary as it is based on only four flow measurements during open water season.

Station Ice 1 daily maximum, minimum and mean gauge heights and calculated mean daily flow volumes are presented in Table 3. Mean daily flow volumes are also presented in hydrograph form (Figure 3). The maximum calculated flow of 0.378 cubic meters per second (cms) at Station Ice 1 occurred on May 23, 1997 at a water level of 0.638 meters. The peak flow is a result of snow melt freshet.

The minimum calculated flow of 0.023 cms occurred June 17 and 18, 1997 at a water level of 0.222 meters. A secondary flow peak occurred during July 23 – 25 at a maximum water level of 0.491 meters after a heavy rainfall precipitation event on July 22 and 23, 1997.

Water Quality

A summary of water quality "insitu" results for pH, conductivity, dissolved oxygen and water temperature are listed in Table 4.

Laboratory analysis results for the eight water quality stations sampled May, July and September are listed in Table 5 through 11.

TABLE 1. FLOW MEASUREMENT SUMMARY – ICE PROPERTY

FOR STATIONS ICE 1 TO ICE 5

May 23 to September 18, 1997

Date	Station	Gauge Ht. (m)	Flow	Base of Staff Gauge Elevation (m)
May 23/97	Ice 1	0.621	0.360	98.324
	Ice 2	-	0.112	-
	Ice 3	-	0.676	-
	Ice 4	0.626	1.436	98.437
	Ice 5	0.534	2.768	98.437
July 17/97	Ice 1	0.267	0.031	
		0.279	0.034	
	Ice 2	-	0.054 E	
	Ice 3	-	0.097	
	Ice 4	0.336	0.262	
	Ice 5	0.198	0.555	
Sept 18/97	Ice 1	0.285	0.024	
	Ice 2	-	0.022	
	Ice 3	-	0.089	
	Ice 4	0.335	0.162	
	Ice 5	0.449	0.444 *	

NOTES: Ice 2 on July 17 – flow Estimated (E)

Ice 5 on Sept. 18 – under backwater effect due to aquatic vegetation growth

TABLE 2. STATION ICE 1. STAGE DISCHARGE VALUES (1997)

Gauge Height (m)	Flow (cms)	Gauge Height (m)	Flow (cms)
0	0	0.36	0.063
0.01	0.0005	0.37	0.069
0.02	0.001	0.38	0.074
0.03	0.002	0.39	0.08
0.04	0.003	0.4	0.086
0.05	0.004	0.41	0.094
0.06	0.005	0.42	0.102
0.07	0.0064	0.43	0.111
0.08	0.0075	0.44	0.119
0.09	0.0085	0.45	0.129
0.1	0.0095	0.46	138
0.11	0.0103	0.47	0.148
0.12	0.011	0.48	0.158
0.13	0.012	0.49	0.169
0.14	0.013	0.5	0.179
0.15	0.0145	0.51	0.192
0.16	0.016	0.52	0.204
0.17	0.017	0.53	0.217
0.18	0.018	0.54	0.229
0.19	0.0195	0.55	0.244
0.2	0.021	0.56	0.259
0.21	0.022	0.57	0.274
0.22	0.023	0.58	0.288
0.23	0.0245	0.59	0.305
0.24	0.026	0.6	0.322
0.25	0.0275	0.61	0.341
0.26	0.029	0.62	0.359
0.27	0.0305	0.63	0.37
0.28	0.032	0.64	0.38
0.29	0.0355	0.65	0.409
0.3	0.039	0.66	0.438
0.31	0.043	0.67	0.464
0.32	0.046	0.68	0.49
0.33	0.049	0.69	0.545
0.34	0.053	0.7	0.6
0.35	0.058		

TABLE 3. SUMMARY OF DAILY WATER LEVEL MAXIMUM, MINIMUM & MEAN

Expatriate Resources Ice Property Station Ice 1

Date	Maximum (m)	Minimum (m)	Mean (m)	Flow (cms)
23-May-97	0.638	0.603	0.625	0.359
24-May-97	0.588	0.441	0.51	0.192
25-May-97	0.435	0.4	0.41	0.094
26-May-97	0.416	0.386	0.394	0.083
27-May-97	0.384	0.365	0.371	0.071
28-May-97	0.377	0.357	0.34	0.053
29-May-97	0.355	0.331	0.343	0.055
30-May-97	0.351	0.328	0.337	0.05
31-May-97	0.342	0.311	0.324	0.047
1-Jun-97	0.323	0.306	0.314	0.044
2-Jun-97	0.312	0.286	0.3	0.039
3-Jun-97	0.318	0.276	0.296	0.037
4-Jun-97	0.294	0.268	0.278	0.03
5-Jun-97	0.289	0.267	0.276	0.031
6-Jun-97	0.301	0.274	0.287	0.034
7-Jun-97	0.297	0.273	0.285	0.033
8-Jun-97	0.283	0.262	0.278	0.032
9-Jun-97	0.269	0.246	0.256	0.028
10-Jun-97	0.264	0.238	0.248	0.027
11-Jun-97	0.262	0.23	0.244	0.026
12-Jun-97	0.248	0.227	0.233	0.025
13-Jun-97	0.242	0.226	0.231	0.025
14-Jun-97	0.231	0.225	0.227	0.024
15-Jun-97	0.227	0.223	0.224	0.023
16-Jun-97	0.223	0.223	0.223	0.023
17-Jun-97	0.223	0.222	0.223	0.023
18-Jun-97	0.238	0.222	0.226	0.024
19-Jun-97	0.229	0.225	0.226	0.024
20-Jun-97	0.238	0.225	0.227	0.024
21-Jun-97	0.237	0.232	0.234	0.025
22-Jun-97	0.235	0.235	0.235	0.025
23-Jun-97	0.244	0.235	0.237	0.025
24-Jun-97	0.312	0.253	0.299	0.036
25-Jun-97	0.298	0.282	0.292	0.036
26-Jun-97	0.28	0.266	0.274	0.031
27-Jun-97	0.264	0.259	0.26	0.029
28-Jun-97	0.262	0.259	0.26	0.029

TABLE 3. SUMMARY OF DAILY WATER LEVEL MAXIMUM, MINIMUM & MEAN (CONT'D)

Expatriate Resources Ice Property Station Ice 1

Date	Maximum (m)	Minimum (m)	Mean (m)	Flow (cms)
29-Jun-97	0.262	0.262	0.262	0.03
30-Jun-97	0.263	0.262	0.263	0.03
1-Jul-97	0.263	0.263	0.263	0.03
2-Jul-97	0.263	0.263	0.263	0.03
3-Jul-97	0.263	0.263	0.263	0.03
4-Jul-97	0.262	0.262	0.262	0.03
5-Jul-97	0.262	0.262	0.262	0.03
6-Jul-97	0.262	0.262	0.262	0.03
7-Jul-97	0.263	0.261	0.262	0.03
8-Jul-97	0.274	0.262	0.266	0.031
9-Jul-97	0.275	0.27	0.274	0.031
10-Jul-97	0.269	0.268	0.268	0.031
11-Jul-97	0.268	0.268	0.268	0.031
12-Jul-97	0.268	0.268	0.268	0.031
13-Jul-97	0.268	0.267	0.267	0.031
14-Jul-97	0.267	0.266	0.266	0.03
15-Jul-97	0.266	0.265	0.265	0.03
16-Jul-97	0.265	0.264	0.265	0.03
17-Jul-97	0.267	0.264	0.266	0.03
18-Jul-97	0.281	0.267	0.272	0.031
19-Jul-97	0.277	0.271	0.274	0.031
20-Jul-97	0.271	0.27	0.27	0.03
21-Jul-97	0.27	0.269	0.27	0.031
22-Jul-97	0.327	0.269	0.278	0.031
23-Jul-97	0.491	0.338	0.424	0.107
24-Jul-97	0.482	0.415	0.451	0.13
25-Jul-97	0.412	0.369	0.389	0.078
26-Jul-97	0.368	0.343	0.356	0.06
27-Jul-97	0.343	0.329	0.338	0.052
28-Jul-97	0.329	0.319	0.322	0.046
29-Jul-97	0.319	0.312	0.316	0.045
30-Jul-97	0.315	0.31	0.313	0.044
31-Jul-97	0.356	0.309	0.335	0.051
1-Aug-97	0.347	0.333	0.34	0.053
2-Aug-97	0.332	0.323	0.329	0.049
3-Aug-97	0.323	0.314	0.32	0.046
4-Aug-97	0.314	0.308	0.312	0.043

TABLE 3. SUMMARY OF DAILY WATER LEVEL MAXIMUM, MINIMUM & MEAN (CONT'D)

Expatriate Resources Ice Property Station Ice 1

Date	Maximum (m)	Minimum (m)	Mean (m)	Flow (cms)
5-Aug-97	0.308	0.302	0.307	0.04
6-Aug-97	0.303	0.299	0.302	0.039
7-Aug-97	0.301	0.297	0.299	0.038
8-Aug-97	0.302	0.297	0.301	0.039
9-Aug-97	0.297	0.293	0.296	0.038
10-Aug-97	0.293	0.289	0.292	0.036
11-Aug-97	0.289	0.287	0.288	0.034
12-Aug-97	0.288	0.287	0.287	0.034
13-Aug-97	0.297	0.288	0.289	0.035
14-Aug-97	0.308	0.301	0.305	0.041
15-Aug-97	0.3	0.297	0.299	0.036
16-Aug-97	0.297	0.294	0.296	0.036
17-Aug-97	0.31	0.294	0.304	0.039
18-Aug-97	0.31	0.303	0.307	0.042
19-Aug-97	0.305	0.303	0.303	0.04
20-Aug-97	0.307	0.304	0.306	0.042
21-Aug-97	0.304	0.301	0.303	0.04
22-Aug-97	0.301	0.299	0.3	0.039
23-Aug-97	0.301	0.299	0.299	0.039
24-Aug-97	0.301	0.297	0.299	0.039
25-Aug-97	0.297	0.294	0.296	0.036
26-Aug-97	0.297	0.294	0.295	0.036
27-Aug-97	0.298	0.296	0.297	0.037
28-Aug-97	0.299	0.297	0.298	0.037
29-Aug-97	0.297	0.294	0.295	0.035
30-Aug-97	0.294	0.292	0.294	0.035
31-Aug-97	0.292	0.289	0.292	0.035
1-Sep-97	0.29	0.288	0.289	0.034
2-Sep-97	0.288	0.288	0.288	0.034
3-Sep-97	0.287	0.287	0.287	0.033
4-Sep-97	0.287	0.286	0.286	0.033
5-Sep-97	0.286	0.286	0.286	0.033
6-Sep-97	0.286	0.286	0.286	0.033
7-Sep-97	0.286	0.285	0.286	0.033
8-Sep-97	0.285	0.284	0.285	0.033
9-Sep-97	0.284	0.284	0.284	0.032
10-Sep-97	0.284	0.284	0.284	0.032
11-Sep-97	0.284	0.284	0.284	0.032
12-Sep-97	0.287	0.284	0.285	0.033
13-Sep-97	0.285	0.285	0.285	0.033
14-Sep-97	0.285	0.285	0.285	0.033
15-Sep-97	0.286	0.285	0.286	0.033
16-Sep-97	0.286	0.286	0.286	0.033
17-Sep-97	0.286	0.285	0.285	0.033

Figure 2. Station Ice 1 – 1997 Hydrograph – Period May 23 to September 17, 1997

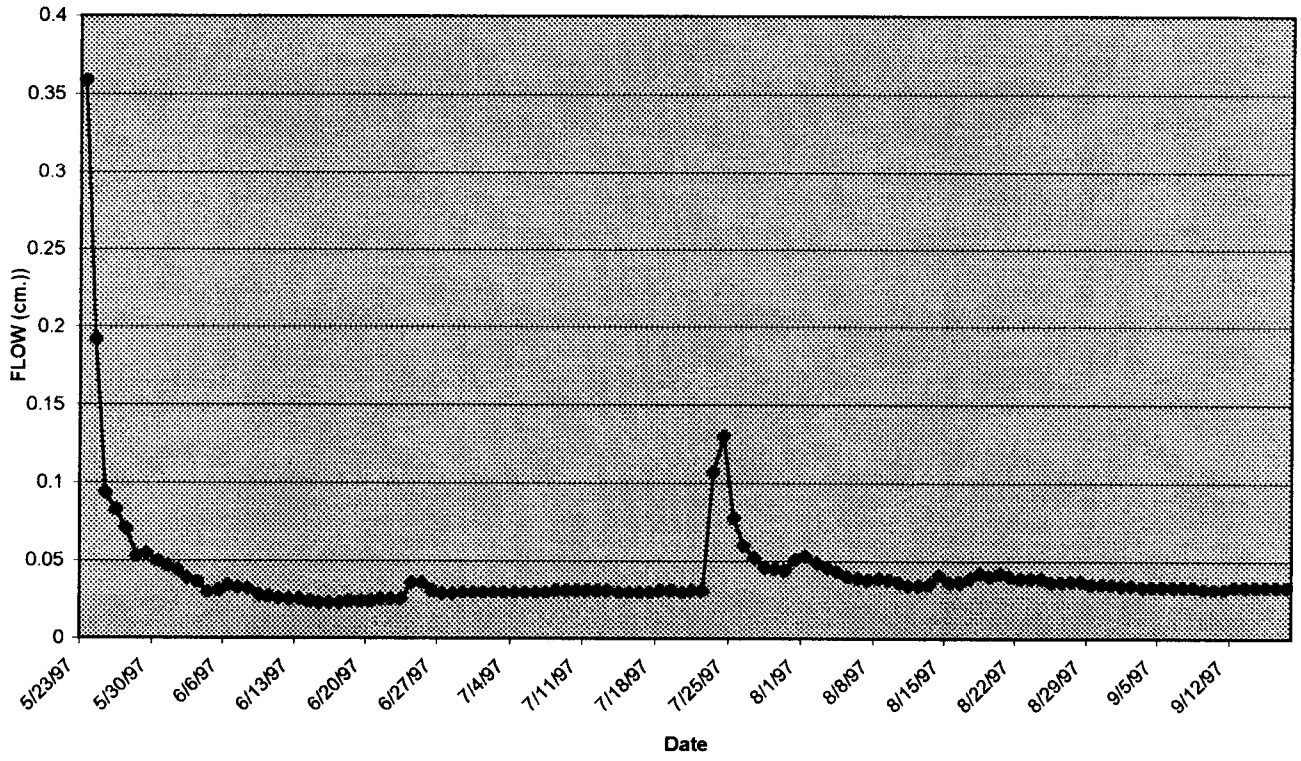


TABLE 4. SUMMARY OF "INSITU" pH, CONDUCTIVITY, DISSOLVED OXYGEN AND WATER TEMPERATURES

Station	pH (ru)			Cond (us/cm			D.O. (mg/l)			W. Temp (C)		
	M	J	S	M	J	S	M	J	S	M	J	S
Ice 1	7.94	7.90	8.22	20.8	367	385	13.5	7.9	8.6	1	1	1
Ice 2	7.24	7.95	8.40	35.1	315	396	7.8	8.0	6.7	9	15	10
Ice 3	7.38	7.92	7.69	22.0	326	359	9.6	9.0	5.8	6	12	8
Ice 4	7.78	8.25	8.16	33.3	378	417	9.3	7.5	5.4	9	12	9
Ice 5	7.62	8.19	8.24	402	410	462	9.4	6.9	5.0	7	16	12
Ice 6	7.64	8.18	8.19	20.0	236	284	10.2	8.6	5.5	5	14	9
Ice 7	7.67	8.09	8.10	21.2	233	272	10.1	8.2	5.6	5	15	9
Ice 8	7.05			17.7			5.1			0		

M = May

J = July

S = September

Ice 8 dry in July and September

TABLE 5. STATION ICE 1 – 1997 WATER QUALITY DATA

Parameter	23-May	17-Jul	18-Sep	Mean	Maximum	Minimum
Conductivity (us)	110	340	350	266	350	110
pH (ru)	7.6	7.7	8	7.7	8	7.6
Turbidity (FTU)	4	<0.5	1	2.62	4	<0.05
Susp. Solids	<5	5	<5	3.33	5	<5
Diss. Solids	121	223	230	191	230	121
Hardness	63.8	183	201	149	201	63.8
Alkalinity	58	160	192	205	192	58
Ammonia	<0.05	<0.05	<0.05	0.0375	<0.05	<0.05
Sulphate	4	19	22.6	15.2	22.6	4
Nitrate N03-N	<0.1	<0.1	<0.1	0.05	<0.1	<0.1
Nitrite N02-N	<0.5	<0.5	<0.5	0.025	<0.5	<0.5
Phosphorus P04-P	0.017	<0.005	<0.005	0.007	0.017	<0.005
Cyanide SAD	-	0.017	0.007	0.012	0.017	0.007
Dissolved Metals						
Aluminum	0.04	<0.01	<0.01	0.024	0.04	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.064	0.148	0.159	0.102	0.159	0.064
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	16.7	47.6	52.3	38.8	52.3	16.7
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.005	0.003	0.003	0.028	0.005	0.003
iron	0.09	0.029	0.018	0.074	0.09	0.018
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	5.3	15.6	17.2	12.7	17.2	5.3
Manganese	0.0042	0.0121	0.0159	0.0107	0.0159	0.0042
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.004	<0.002	<0.002	0.002	0.004	<0.002
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.9	0.5	0.6	0.67	0.9	0.5
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	2.37	3.87	4.21	3.48	4.21	2.37
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	0.7	1.9	2.1	1.57	2.1	0.7
Strontium	0.045	0.122	0.131	0.099	0.131	0.045
Sulphur	2.3	6.3	6.5	5.03	6.5	2.3
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005

TABLE 5. STATION ICE 1 – 1997 WATER QUALITY DATA (CONT'D)

Parameter	23-May	17-Jul	18-Sep	Mean	Maximum	Minimum
Dissolved Metals (cont'd)						
Titanium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	<0.002	0.003	0.003	0.0023	0.003	<0.002
Zinc	0.009	0.005	0.002	0.0053	0.009	0.002
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Total Metals						
Aluminum	0.67	0.01	<0.01	0.228	0.67	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0692	0.15	0.161	0.127	0.161	0.0692
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	17.3	48.9	52.3	39.5	52.3	17.3
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.002
Copper	0.009	0.005	0.008	0.007	0.009	0.005
iron	0.243	<0.033	0.023	0.099	0.243	0.023
lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	5.54	15.9	17.2	12.88	17.2	5.54
Manganese	0.0136	0.0142	0.0162	0.01	0.0162	0.0136
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.003	<0.002	<0.002	0.001	0.003	<0.002
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.7	0.4	0.9	0.67	0.9	0.4
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	2.65	3.98	4.27	3.63	4.27	2.65
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	0.74	2.32	2.12	1.73	2.32	0.74
Strontium	0.047	0.127	0.133	0.102	0.133	0.047
Sulphur	3.2	6.6	6.7	5.5	6.7	3.2
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	0.004	<0.001	<0.001	0.00016	0.004	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	<0.002	0.004	0.004	0.003	0.004	<0.002
Zinc	0.009	0.013	0.002	0.008	0.013	0.002
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

For Hardness (mean Value) of 149 mg/l

TABLE 6. ICE PROPERTY, STATION ICE 2 1997 WATER QUALITY DATA

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Conductivity(us)	190	290	365	282	365	190
pH (ru)	7.6	8	8	7.9	8	7.6
Turbidity(FTU)	4	4.6	2	3.5	4.6	2
Susp.Solids	14	34	<5	17.2	34	<5
Diss.Solids	162	227	268	219	268	162
Hardness	111	191	212	171	212	111
Alkalinity	86	124	169	126	169	86
Ammonia	<0.05	<0.05	<0.05	0.025	<0.05	<0.05
Sulphate	15	26.9	37.7	26.5	37.7	15
Nitrate N03-N	<0.1	<0.1	<0.1	0.05	<0.01	<0.1
Nitrite N02-N	<0.5	<0.5	<0.5	0.25	<0.05	<0.05
Phosphorus P04-P	0.025	0.007	<0.005	0.0115	0.025	<.005
Cyanide SAD	-	0.04	0.018	0.029	0.04	0.018
Dissolved Metals						
Aluminum	0.02	0.02	<0.01	0.015	0.02	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0471	0.058	0.067	0.057	0.067	0.0471
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	22.7	35.2	46.5	34.8	46.5	22.7
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<.001	<0.001
Copper	0.004	0.005	0.003	0.004	0.005	0.003
Iron	0.401	0.21	0.116	0.242	0.401	0.116
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	0.003	<0.002	0.0025	0.003	<0.002
Magnesium	8.9	14.9	21.5	15.1	21.5	8.9
Manganese	0.0338	0.0187	0.0134	0.022	0.0338	0.0134
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.004	0.003	0.003	0.0033	0.004	0.003
Phosphorus	<0.06	<0.06	<0.06	0.06	<0.06	<0.06
Potassium	0.8	<0.2	0.6	0.5	0.8	<0.02
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	2.78	2.3	2.8	2.63	2.8	2.3
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	2.41	4.45	5.9	4.25	5.9	2.41
Strontium	0.067	0.113	0.145	0.131	0.145	0.067
Sulphur	5.5	11	13.4	9.97	13.4	5.5
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005

TABLE 6. STATION ICE 2 1997 WATER QUALITY DATA (CONT'D)

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Dissolved Metals cont'd						
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Uranium	<0.06	0.06	<0.06	0.04	0.06	<0.06
Vanadium	0.003	<0.002	0.003	0.042	0.003	<0.002
Zinc	0.006	0.006	0.003	0.005	0.006	0.003
Zirconium	<0.001	0.001	<0.001	0.0007	0.001	<0.001
Total Metals						
Aluminum	0.29	1.76	0.1	0.716	1.76	0.1
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	0.03	<0.02	<0.02	0.017	0.03	<0.02
Barium	0.0641	0.145	0.0723	0.094	0.145	0.0641
Beryllium	0.0003	<0.0002	<0.0002	0.0002	0.0003	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	26.2	40.3	47.9	38.13	47.9	26.2
Chromium	<0.001	0.005	<0.001	0.002	0.005	<0.001
Cobalt	<0.001	0.002	<0.001	0.0015	0.002	<0.001
Copper	0.008	0.014	0.006	0.009	0.014	0.006
Iron	0.799	6	0.39	2.39	6	0.39
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<.002	<0.002
Magnesium	10.2	16.9	22.2	16.4	22.2	10.2
Manganese	0.0437	0.188	0.023	0.085	0.188	0.023
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.004	0.008	0.003	0.005	0.008	0.003
Phosphorus	<0.06	0.23	<0.06	0.097	0.23	<0.06
Potassium	1.1	0.9	0.7	0.9	1.1	0.7
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	3.26	5	2.96	3.74	5	2.96
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	2.67	4.85	5.94	4.49	5.94	2.67
Strontium	0.078	0.13	0.15	0.12	0.15	0.078
Sulphur	5.6	9.8	13.7	9.7	13.7	5.6
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	0.003	0.021	0.001	0.008	0.021	0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<.06
Vanadium	0.004	0.009	0.003	0.005	0.009	0.003
Zinc	0.007	0.047	0.004	0.019	0.047	0.004
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

For hardness (mean value) of 171 mg/l

TABLE 7. STATION ICE 3 1997 WATER QUALITY DATA

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Conductivity(us)	130	300	330	253	330	130
pH (ru)	7.6	8.2	8	7.9	8.2	7.6
Turbidity(FTU)	18	8.9	3	10	18	3
Susp.Solids	150	19	<5	57.2	150	<5
Diss.Solids	125	210	236	190	236	125
Hardness	94.1	184	191	156	191	94.1
Alkalinity	67	173	178	139	178	67
Ammonia	<0.05	<0.05	<0.05	0.025	<0.05	<0.05
Sulphate	5	12.6	18.3	12	18.3	5
Nitrate N03-N	<0.1	<0.1	<0.1	0.05	<.1	<.1
Nitrite N02-N	<0.5	<0.5	<0.5	0.25	<0.5	<0.5
Phosphorus P04-P	0.025	0.032	0.01	0.022	0.032	0.01
Cyanide SAD	-	0.03	0.02	0.025	0.03	0.02
Dissolved Metals						
Aluminum	0.02	0.02	<0.01	0.015	0.02	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0757	0.141	0.138	0.118	0.141	0.0757
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	15.5	38.5	39.2	31.1	39.2	15.5
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.004	0.003	0.003	0.003	0.004	0.003
Iron	0.301	0.303	0.244	0.283	0.303	0.244
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	7.93	20	20.4	16.1	20.4	7.93
Manganese	0.124	0.0889	0.0854	0.099	0.124	0.0854
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.005	0.003	<0.002	0.003	0.005	<0.002
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.9	<0.2	0.6	0.53	0.9	<0.2
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	2.63	5.18	6.66	4.82	6.66	2.63
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	0.8	2.24	2.31	1.78	2.31	0.8
Strontium	0.05	0.121	0.12	0.097	0.121	0.05
Sulphur	2.1	5.1	5.4	4.2	5.4	2.1
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005

TABLE 7. STATION ICE 3 1997 WATER QUALITY DATA (CONT'D)

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Dissolved Metals cont'd						
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	<0.002	0.004	0.003	0.0027	0.004	<0.002
Zinc	0.007	<0.001	0.001	0.0028	0.007	<0.001
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Total Metals						
Aluminum	1.63	0.45	0.1	0.73	1.63	0.1
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.174	0.161	0.141	0.159	0.174	0.141
Beryllium	0.0003	<0.0002	<0.0002	0.0002	0.0003	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	17.1	38.6	40.7	32.1	40.7	17.1
Chromium	0.005	0.002	<0.001	0.0025	0.005	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.019	0.009	0.004	0.011	0.019	0.004
Iron	4	1.09	0.492	1.86	4	0.492
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	8.65	20.1	21.2	16.65	21.2	8.65
Manganese	0.234	0.123	0.094	0.15	0.234	0.094
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.011	0.005	0.003	0.006	0.011	0.003
Phosphorus	0.22	<0.06	<0.06	0.093	0.22	<0.06
Potassium	0.9	0.3	0.6	0.6	0.9	0.03
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	5.04	5.88	6.72	5.88	6.72	5.04
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	0.85	2.28	2.35	1.83	2.35	0.85
Strontium	0.053	0.127	0.124	0.101	0.127	0.053
Sulphur	2.3	5.1	5.6	4.33	5.6	2.3
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	0.06	0.023	0.006	0.029	0.06	0.0006
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	0.007	0.006	0.003	0.005	0.007	0.003
Zinc	0.027	0.015	0.003	0.015	0.027	0.003
Zirconium	<0.001	0.001	<0.001	0.0007	0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

For hardness (mean value) of 156 mg/l

TABLE 8. STATION ICE 4 1997 WATER QUALITY DATA

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Conductivity(us)	190	330	380	300	380	190
pH (ru)	7.9	8.1	8.4	8.1	8.4	7.9
Turbidity(FTU)	18	2.5	3	7.8	18	3
Susp.Solids	66	6	<5	24.8	66	<5
Diss.Solids	162	263	279	235	279	162
Hardness	114	199	235	167	235	114
Alkalinity	88	168	188	148	188	88
Ammonia	<0.05	<0.05	<0.05	0.025	<0.05	<0.05
Sulphate	14	34.5	33.1	27.2	34.5	14
Nitrate N03-N	<0.1	<0.1	<0.1	0.05	<0.1	<0.1
Nitrite N02-N	<0.5	<0.5	<0.5	0.25	<0.5	<0.5
Phosphorus P04-P	0.029	0.01	<0.005	0.014	0.029	0.0025
Cyanide SAD	-	0.03	0.013	0.08	0.013	0.03
Dissolved Metals						
Aluminum	0.01	<0.01	<0.01	0.007	0.01	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0712	0.0899	0.0927	0.085	0.0927	0.0712
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	22.3	40.7	46.2	36.4	46.2	22.3
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.005	0.005	0.004	0.007	0.005	0.004
Iron	0.301	0.168	0.179	0.216	0.301	0.168
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	0.003	<0.002	0.0025	0.003	<0.002
Magnesium	11.3	25.1	27.5	21.3	27.5	11.3
Manganese	0.0507	0.0176	0.0445	0.0376	0.0507	0.0176
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.005	0.003	0.004	0.004	0.005	0.003
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.7	0.4	0.9	0.67	0.9	0.04
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	3.27	4.72	5.02	4.34	5.02	3.27
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	1.22	2.74	2.96	2.31	2.96	1.22
Strontium	0.069	0.133	0.142	0.115	0.142	0.069
Sulphur	5.1	12.3	12	9.8	12.3	5.1
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005

TABLE 8. STATION ICE 4 1997 WATER QUALITY DATA (CONT'D)

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Dissolved Metals (cont'd)						
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	0.002	0.005	0.003	0.003	0.005	0.002
Zinc	0.014	0.008	0.002	0.008	0.014	0.002
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Total Metals						
Aluminum	0.67	0.08	0.03	0.26	0.67	0.03
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.12	0.0944	0.0935	0.1026	0.12	0.0935
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	23.2	39.2	47.3	36.6	47.3	23.2
Chromium	0.004	<0.001	<0.001	0.0017	0.0004	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.031	0.012	0.011	0.018	0.031	0.011
Iron	1.69	0.342	0.238	0.757	1.69	0.238
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	11.8	24.1	28.2	21.4	28.2	11.8
Manganese	0.139	0.0705	0.0542	0.0879	0.139	0.0542
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.011	0.005	0.005	0.007	0.011	0.005
Phosphorus	0.09	<0.06	<0.06	0.05	0.09	<0.06
Potassium	0.8	0.5	0.9	0.73	0.9	0.5
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	4.28	4.7	5.12	4.7	5.12	4.28
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	1.24	3.28	3.01	2.51	3.28	1.24
Strontium	0.073	0.132	0.147	0.117	0.147	0.073
Sulphur	5.3	12.1	12.2	9.87	12.2	5.3
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	0.015	0.002	<0.001	0.0058	0.015	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	0.005	0.003	0.003	0.039	0.005	0.003
Zinc	0.019	0.006	0.007	0.011	0.019	0.006
Zirconium	0.001	<0.001	<0.001	0.0007	0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

For hardness (mean value) of .167 mg/l

TABLE 9. STATION ICE 5 1997 WATER QUALITY DATA

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Conductivity(us)	340	380	410	377	410	340
pH (ru)	8.2	8.1	8.2	8.2	8.2	8.1
Turbidity(FTU)	4	1.2	2	2.4	4	1.2
Susp.Solids	6	<1	<5	3	6	<1
Diss.Solids	267	280	317	288	317	267
Hardness	194	221	244	220	244	194
Alkalinity	135	137	179	150	179	135
Ammonia	<0.05	<0.05	<0.05	0.025	<0.05	<0.05
Sulphate	44	53.1	57.7	51.6	57.7	44
Nitrate N03-N	<0.1	<0.1	<0.1	0.05	<0.1	<0.1
Nitrite N02-N	<0.5	<0.5	<0.5	0.025	<0.5	<0.5
Phosphorus P04-P	0.031	0.013	<0.005	0.016	0.031	<0.005
Cyanide SAD	-	0.029	0.005	0.017	0.029	0.005
Dissolved Metals						
Aluminum	<0.01	<0.01	<0.01	0.005	<0.01	<0.01
Antimony	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0551	0.0663	0.0662	0.0625	0.0663	0.0551
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	0.0007	<0.0005	0.0004	0.0007	<0.0005
Calcium	32.7	43	46.7	40.8	46.7	32.7
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.003	0.004	0.003	0.0033	0.004	0.003
Iron	0.124	0.083	0.057	0.088	0.124	0.057
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	19.9	26.7	29.5	25.4	29.5	19.9
Manganese	0.0185	0.0299	0.0371	0.0285	0.0371	0.0185
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.003	<0.002	0.003	0.0023	0.003	<0.002
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.7	0.9	1	0.87	1	0.7
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	3.69	3.4	4.02	3.7	4.02	3.4
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	1.78	2.39	2.67	2.28	2.67	1.78
Strontium	0.11	0.152	0.159	0.14	0.159	0.11
Sulphur	17.4	18.5	19.2	18.4	19.2	17.4
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005

TABLE 9. STATION ICE 5 1997 WATER QUALITY DATA (CONT'D)

Parameter	May 23	July 17	Sept. 18	Mean	Maximum	Minimum
Dissolved Metals (cont'd)						
Titanium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	0.003	0.003	0.003	0.003	0.003	0.003
Zinc	0.007	0.01	0.004	0.007	0.01	0.004
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Total Metals						
Aluminum	0.09	0.02	0.01	0.04	0.09	0.01
Antimony	<0.02	<0.02	<0.02	0.01	<.02	<0.02
Arsenic	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Barium	0.0684	0.0681	0.0698	0.0688	0.0681	0.0698
Beryllium	<0.0002	<0.0002	<0.0002	0.0001	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	0.00025	<0.0005	<0.0005
Calcium	38.8	43.7	47.4	43.3	47.4	38.8
Chromium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Copper	0.042	0.008	0.009	0.0197	0.042	0.008
Iron	0.29	0.122	0.137	0.183	0.29	0.122
Lead	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Lithium	<0.002	<0.002	<0.002	0.001	<0.002	<0.002
Magnesium	23.4	27.1	29.5	26.67	29.5	23.4
Manganese	0.0336	0.0249	0.0371	0.0318	0.0371	0.0249
Molybdenum	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Nickel	0.005	<0.002	0.003	0.003	0.005	<0.002
Phosphorus	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Potassium	0.9	0.8	1	0.9	1	0.8
Selenium	<0.02	<0.02	<0.02	0.01	<0.02	<0.02
Silicon	3.91	3.36	4.08	3.78	4.08	3.36
Silver	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
Sodium	2.04	2.45	2.72	2.4	2.72	2.04
Strontium	0.135	0.154	0.163	0.151	0.163	0.135
Sulphur	21.7	17.7	19.4	19.6	21.7	17.7
Thorium	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005
Titanium	0.001	<0.001	<0.001	0.0007	0.001	<0.001
Uranium	<0.06	<0.06	<0.06	0.03	<0.06	<0.06
Vanadium	0.004	0.004	0.004	0.004	0.004	0.004
Zinc	0.013	0.007	0.005	0.0083	0.013	0.005
Zirconium	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

For hardness (mean value) of .220 mg/l

TABLE 10. PELLY RIVER RECIEVING WATERS STATIONS ICE 6 & 7

Parameter	Ice 6 May 23	Ice 6 July 17	Ice 6 Sept. 18	Ice 7 May 23	Ice 7 July 7	Ice 7 Sept. 18
Conductivity(us)	110	210	260	115	210	260
pH (ru)	7.7	7.9	8.3	7.6	7.9	8.1
Turbidity(FTU)	52	6.6	2	43	6.5	2
Susp.Solids	131	6	<5	88	16	<5
Diss.Solids	98	143	185	101	150	194
Hardness	91.8	118	147	81.8	116	146
Alkalinity	39	79	103	45	89	97
Ammonia	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	14	36.9	41.2	14	37.5	41.3
Nitrate N03-N	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite N02-N	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phosphorus P04-P	0.064	0.018	<0.005	0.062	0.015	<0.005
Cyanide SAD	-	0.019	0.008	-	0.026	0.019
Dissolved Metals						
Aluminum	0.22	0.05	0.04	0.18	0.04	0.04
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Barium	0.0541	0.0651	0.07	0.0538	0.0639	0.0697
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Calcium	15.9	32.6	38.8	17.1	31.8	38.5
Chromium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.005	0.004	0.005	0.005	0.004	0.004
Iron	0.216	0.062	0.049	0.191	0.043	0.045
Lead	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lithium	<0.002	0.003	0.002	<0.002	<0.002	0.003
Magnesium	4.23	8.99	11	4.39	8.85	11
Manganese	0.0031	0.0063	0.0079	0.0032	0.0053	0.0076
Molybdenum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nickel	0.017	0.003	0.005	0.005	0.002	0.004
Phosphorus	0.32	<0.06	<0.06	<0.06	<0.06	<0.06
Potassium	1.6	0.6	0.7	0.8	0.6	0.6
Selenium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Silicon	6.31	2.49	2.68	1.95	2.42	2.72
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sodium	0.56	1.18	1.39	0.59	1.13	1.36
Strontium	0.08	0.139	0.166	0.076	0.136	0.16
Sulphur	5.2	12.5	14.6	5	12.5	15
Thorium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 10. PELLY RIVER RECIEVING WATERS STATIONS ICE 6 & 7 (CONT'D)

Parameter	Ice 6 May 23	Ice 6 July 17	Ice 6 Sept. 18	Ice 7 May 23	Ice 7 July 7	Ice 7 Sept. 18
Dissolved Metals (cont'd)						
Tin	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium	0.034	<0.001	<0.001	0.004	<0.001	<0.001
Uranium	<0.06	<0.06	<0.06	<0.06	0.07	<0.06
Vanadium	0.029	0.003	0.002	0.004	0.003	0.003
Zinc	0.124	0.036	0.015	0.014	0.014	0.011
Zirconium	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals						
Aluminum	3.3	0.31	0.17	1.77	0.25	0.04
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Barium	0.298	0.0815	0.0888	0.194	0.0766	0.0739
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium	0.0014	<0.0005	<0.0005	0.0009	<0.0005	<0.0005
Calcium	17.6	31.8	39.5	18.2	31.3	39.6
Chromium	0.005	<0.001	<0.001	0.003	<0.001	<0.001
Cobalt	0.002	<0.001	<0.001	0.001	<0.001	<0.001
Copper	0.034	0.005	0.007	0.013	0.005	0.004
Iron	4.39	0.441	0.042	3	0.358	0.1
Lead	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lithium	<0.002	0.003	0.006	<0.002	0.004	0.004
Magnesium	5.25	8.83	11.2	5.07	8.77	11.2
Manganese	0.142	0.0203	0.0351	0.0988	0.0172	0.0112
Molybdenum	,0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nickel	0.017	0.004	0.006	0.013	0.003	0.005
Phosphorus	0.32	<0.06	0.07	0.23	<0.06	<0.06
Potassium	1.6	0.7	0.8	1.2	0.8	0.7
Selenium	<0.02	0.03	<0.02	<0.02	<0.02	<0.02
Silicon	6.31	2.79	2.85	4.15	2.69	2.72
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sodium	0.56	1.1	1.69	0.59	1.14	1.4
Strontium	0.08	0.14	0.172	0.086	0.137	0.17
Sulphur	5.2	12.3	14.8	5.3	12.5	15.3
Thorium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tin	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium	0.034	0.003	0.002	0.02	0.003	<0.001
Uranium	<0.06	<0.06	<0.06	<0.06	0.06	<0.06
Vanadium	0.029	0.005	0.004	0.014	0.005	0.003
Zinc	0.124	0.023	0.028	0.085	0.021	0.014
Zirconium	0.002	<0.001	<0.001	0.001	<0.001	<0.001
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

Station Ice 6 – Mean hardness value = 118 mg/l

Station Ice 7 – Mean Harness value = 115 mg/l

TABLE 11. STATION ICE 8 1997 WATER QUALITY DATA

Parameter	May 23	July 17	September 18
Conductivity (us)	140	Not Sampled	
pH (ru)	7.3		
Turbidity (FTU)	2		
Susp. Solids	<5		
Diss. Solids	162		
Hardness	81.3		
Alkalinity	67		
Ammonia	<0.05		
Sulphate	7		
Nitrate N03-N	<0.1		
Nitrite N02-N	<0.5		
Phosphorus P04-P	0.031		
Cyanide SAD	-		
Dissolved Metals			
Aluminum	0.1		
Antimony	<0.02		
Arsenic	<0.02		
Barium	0.0381		
Beryllium	<0.0002		
Bismuth	<0.02		
Cadmium	<0.0005		
Calcium	22		
Chromium	<0.001		
Cobalt	<0.001		
Copper	0.056		
Iron	0.057		
Lead	<0.005		
Lithium	<0.002		
Magnesium	6.26		
Manganese	0.133		
Molybdenum	<0.005		
Nickel	<0.002		
Phosphorus	<0.06		
Potassium	0.9		
Selenium	<0.02		
Silicon	7.69		
Silver	<0.001		
Sodium	1.15		
Strontium	0.039		
Sulphur	4		
Thorium	<0.005		
Tin	<0.005		

TABLE 11. STATION ICE 8 1997 WATER QUALITY DATA (CONT'D)

Parameter	May 23	July 17	September 18
Dissolved Metals (cont'd)			
Titanium	<0.001		
Uranium	<0.06		
Vanadium	<0.002		
Zinc	0.017		
Zirconium	0.001		
Total Metals			
Aluminum	0.09		
Antimony	<0.02		
Arsenic	<0.02		
Barium	0.0421		
Beryllium	<0.0002		
Bismuth	<0.02		
Cadmium	<0.0005		
Calcium	22.8		
Chromium	<0.001		
Cobalt	<0.001		
Copper	0.069		
Iron	0.061		
Lead	<0.005		
Lithium	<0.002		
Magnesium	6.45		
Manganese	0.015		
Molybdenum	<0.005		
Nickel	0.003		
Phosphorus	0.06		
Potassium	1.2		
Selenium	<0.02		
Silicon	8.15		
Silver	<0.001		
Sodium	1.12		
Strontium	0.042		
Sulphur	4		
Thorium	<0.005		
Tin	<0.005		
Titanium	<0.001		
Uranium	<0.06		
Vanadium	0.003		
Zinc	0.018		
Zirconium	0.002		
	mg/l	mg/l	mg/l

For hardness value of 81.3

Water Quality (Cont'd)

The mean, maximum and minimum values for each water quality parameter are included in the tables for Stations Ice 1 through Ice 5.

Statistical values were not calculated for Pelly River receiving water stations Ice 6 and Ice 7. Statistical values were also not calculated for station Ice 8 and there was only one sample event.

Excluding Pelly River receiving water stations (Ice 6 and 7), all water quality parameter values were compared to the ***Federal Water Quality Criteria for Protection of Aquatic Life (CCME 1991)*** on page 28. The federal criteria are based on total values (physical parameters and total metal parameters) and are specific to the total hardness value of the water. Water quality values that exceed the federal criteria are highlighted and the mean measured hardness value for each station is listed below the table.

Cyanide values are listed in the Federal Criteria as "free" cyanide. Norwest Labs utilizes strong acid dissociable (SAD) analysis as the measure of "free" cyanide.

The following parameters (total values) for each station exceed the Criteria guideline levels on one or more occasions:

Ice 1	Ice 2	Ice 3	Ice 4	Ice 5	Ice 8
Cyanide Aluminum Copper	Cyanide Aluminum Copper Iron	Susp. Solids Aluminum Copper Iron	Susp. Solids Aluminum Copper Iron	Copper	Copper

Pelly River receiving waters at stations Ice 6 and 7 exceed the Criteria guidelines for the same parameters with the exception of cyanide.

As there is no industrial activity in the area, the cyanide values measured at stations Ice 1 and 2 can be attributed to the natural degradation of organic matter resulting in carbon and nitrogen combining.

Climate

Precipitation and temperatures measured twice daily at the Ice camp are listed in Table 12.

Daily maximum and minimum temperatures and precipitation values are also listed along with monthly total and mean values.

Federal Water Quality Criteria for Protection of Aquatic Life

CCME 1991

Parameter	Federal CCME	Comments
pH (ru)	6.5 to 9.0	
Suspended Solids (total)	+10 or 10%	Above background
Cyanide	0.005	As free cyanide
Aluminum (total)	0.10	For pH > 6.5
Arsenic (total)	0.05	
Cadmium (total)	0.0018	For hardness >180 mg/l
	0.0013	For hardness 120-180
	0.008	For hardness 60-120
Chromium (total)	0.02	For protection of fish
Copper (total)	0.004	For hardness >180 mg/l
	0.003	For hardness 120-180
	0.002	For hardness 60-120
Iron (total)	0.30	
Lead (total)	0.007	For hardness >180 mg/l
	0.004	For hardness 120-180
	0.002	For hardness 60-120
Nickel (total)	0.150	For hardness >180 mg/l
	0.110	For hardness 120-180
	0.065	For hardness 60-120
Selenium (total)	0.001	
Silver (total)	0.0001	
Zinc (total)	0.03	

CCME = Canadian Council of Ministers of Environment (1991 Guidelines)

Ice stations hardness as Cac03 (mean values) range 81.3 mg/l at Ice 8 to 220 mg/l at Ice 5.

TABLE 12. ICE PROPERTY. 1997 SUMMARY OF WEATHER DATA.

	0700 Hrs			1900 Hrs			Daily		
	Temperature		Precip	Temperature		Precip			
Date	Max (C)	Min(C)	(mm)	Max (C)	Min (C)	(mm)	Max (C)	Min (C)	Precip(mm)
May 24	13	1	0	11	2	0	13	1	0
May 25	6	-2	0	4	-1	1.8	6	-2	1.8
May 26	3	-3	0	5	-2	0	5	-3	0
May 27	3	-2	0	9	-2	0	9	-2	0
May 28	6	-4	0	15	-3	0	15	-4	0
May 29	21	6	0	18	1	0	21	1	0
May 30	18	3	0	15	5	0	18	3	0
May 31	13	2	0.2	20	2	0	20	2	0.2
	17	5	0				17	5	0
					Monthly Total				2.0
					Monthly Mean		13.8	0.11	0.22
June 1				16	6	0	16	6	0
June 2	13	2	0	11	3	0	13	2	0
June 3	13	2	tr	19	6	0	19	2	0.1
June 4	16	7	0	16	9	tr	16	7	0.1
June 5	13	7	0	14	7	0.4	14	7	0.4
June 6	8	5	1.6	10	3	0.1	10	3	1.7
June 7	12	3	0	16	4	0	16	3	0
June 8	10	2	0	16	2	0	16	2	0
June 9	14	6	0	19	4	0	19	4	0
June 10	15	4	0	16	3	0.8	16	3	0.8
June 11	19	8	0	25	12	0	25	8	0
June 12	20	11	0	17	10	tr	20	10	0.1
June 13	13	5	1.3	15	6	0	15	5	1.3
June 14	19	3	0	19	7	0	19	3	0
June 15	20	6	0.1	19	6	0	20	6	0.1
June 16	17	7	2.0	17	6	0.8	17	6	2.8
June 17	12	6	3.5	19	6	tr	19	6	3.6
June 18	20	8	0	23	8	0	23	8	0
June 19	15	7	1.4	21	8	5.4	21	7	6.8
June 20	13	9	0.9	25	6	0	25	6	0.9
June 21	26	11	0	28	8	0	28	8	0
June 22	26	11	1.8	21	11	3.2	26	11	5.0
June 23	16	8	8.8	20	8	0	20	8	8.8
June 24	21	12	0	21	11	0	21	11	0
June 25	20	12	0	20	13	0	20	12	0
June 26	20	9	0	19	8	0	20	8	0
June 27	20	8	0.1	20	7	3.3	20	7	3.4
June 28	12	7	1.0	14	6	1.4	14	6	2.4
June 29	14	3	0.2	19	4	0	19	3	0.2
June 30	nr	nr	nr	nr	nr	nr			
	22	7	0				22	7	0
					Monthly Total				39.0
					Monthly Mean		19.0	6.2	1.3
July 1				25	11	0	25	11	0
July 2	24	12	0	25	15	0.1	25	12	0.1
July 3	25	11	0	23	13	0	25	11	0
July 4	25	9	1.2	22	7	0	25	7	1.2

TABLE 12. ICE PROPERTY. 1997 SUMMARY OF WEATHER DATA. (CONT'D)

	0700 Hrs			1900 Hrs			Daily		
	Temperature		Precip	Temperature		Precip			
Date	Max (C)	Min(C)	(mm)	Max (C)	Min (C)	(mm)	Max (C)	Min (C)	Precip(mm)
July 5	18	8	0	23	9	2.2	23	8	2.2
July 6	19	9	0	23	10	tr	23	9	0.1
July 7	21	13	0	22	8	10.3	22	8	10.3
July 8	16	8	9.6	15	9	tr	16	8	9.7
July 9	14	9	0	23	10	0	23	9	0
July 10	24	11	0	23	11	1.0	24	11	1.0
July 11	18	11	0	25	13	0	25	11	0
July 12	25	9	1.0	20	10	0	25	9	1.0
July 13	21	10	0	24	10	0	24	10	0
July 14	24	11	0	21	10	tr	24	10	0.1
July 15	16	10	1.0	16	9	tr	16	9	1.1
July 16	16	8	0.6	14	9	3.0	16	8	3.6
July 17	11	9	0.4	6	4	13.6	11	4	14.0
July 18	8	3	4.0	18	7	2.6	18	7	6.6
July 19	12	6	0	17	9	0	17	6	0
July 20	18	6	tr	19	12	tr	19	6	0.2
July 21	16	7	0	25	7	0	25	7	0
July 22	15	12	0.2	12	9	15.0	15	9	15.2
July 23	11	7	12.8	9	6	7.0	11	6	19.8
July 24	9	6	1.5	14	6	tr	14	6	1.6
July 25	16	10	0	22	11	0	22	10	0
July 26	21	13	0	22	15	0	22	13	0
July 27	23	13	0.2	23	15	0	23	13	0.2
July 28	23	12	0	24	14	0	24	12	0
July 29	19	10	0	23	13	0	23	10	0
July 30	21	8	1.8	20	9	1.0	21	8	2.8
July 31	20	8	7.0	16	8	8.7	20	8	15.7
	16	5	0				16	5	0
					Monthly Total				105.4
					Monthly Mean		21.4	9.1	3.4
Aug. 1				17	7	0	17	7	0
Aug. 2	17	5	0	17	6	0	17	5	0
Aug. 3	18	8	0	22	13	0	22	8	0
Aug. 4	21	10	0	23	13	0	23	10	0
Aug. 5	23	12	0	25	13	0	25	12	0
Aug. 6	23	8	0	23	10	0	23	8	0
Aug. 7	20	8	0	18	10	1.0	20	8	1.0
Aug. 8	13	8	tr	20	9	0	20	8	0.1
Aug. 9	19	10	tr	21	11	0	21	10	0.1
Aug. 10	17	10	0	24	11	0	24	10	0
Aug. 11	21	13	tr	22	11	0	22	11	0.1
Aug. 12	18	9	0.5	16	9	2.3	18	9	2.8
Aug. 13	12	8	0	13	9	3.0	13	18	3.0
Aug. 14	14	7	12.8	15	6	tr	15	6	12.9
Aug. 15	13	7	0	17	7	0	17	7	0
Aug. 16	17	7	0	19	9	0	19	7	0
Aug. 17	18	3	5.3	9	2	2.4	18	2	7.7
Aug. 18	8	4	2.6	10	5	0	10	4	2.6

TABLE 12. ICE PROPERTY. 1997 SUMMARY OF WEATHER DATA. (CONT'D)

	0700 Hrs			1900 Hrs			Daily		
	Temperature		Precip	Temperature		Precip			
Date	Max (C)	Min(C)	(mm)	Max (C)	Min (C)	(mm)	Max (C)	Min (C)	Precip(mm)
Aug. 19	14	7	0	13	7	1.8	14	7	1.8
Aug. 20	13	5	0	10	6	0	13	5	0
Aug. 21	15	8	0	19	8	0	19	8	0
Aug. 22	17	7	0	13	7	0	17	7	0
Aug. 23	13	7	0	15	7	1.2	15	7	1.2
Aug. 24	13	9	0	13	9	0	13	9	0
Aug. 25	15	9	0.2	17	9	0	17	9	0.2
Aug. 26	17	9	0	19	9	1.2	19	9	1.2
Aug. 27	15	8	4.2	17	8	3.0	17	8	7.2
Aug. 28	13	10	0	15	10	0	15	10	0
Aug. 29	14	5	0	13	5	0	14	5	0
Aug. 30	14	4	0	15	5	0	15	4	0
Aug. 31	16	9	0	19	8	0	19	8	0
	17	7	0				17	7	0
					Monthly Total				41.9
					Monthly Mean		18.3	8.2	1.35
Sept 1				19	7	0	19	7	0
Sept 2	16	7	0	17	6	0	17	6	0
Sept 3	15	7	0	17	7	0	17	7	0
Sept 4	15	7	0	18	7	0	18	7	0
Sept 5	14	6	2.0	15	5	0	15	5	2.0
Sept 6	11	3	0	14	3	0	14	3	0
Sept 7	14	4	0	15	15	0	15	4	0
Sept 8	14	6	1.6	17	7	0	17	6	1.6
Sept 9	14	4	0	nr	nr	nr	14	4	0
Sept 10	nr	nr	nr	nr	nr	nr			
Sept 11	nr	nr	nr	nr	nr	nr			
Sept 12	15	4	2.8	8	3	tr	15	3	0.1
Sept 13	5	1	0	9	0	0	9	0	0
Sept 14	8	1	tr	9	1	0	9	1	0.1
Sept 15	9	1	0	7	1	0	9	1	0
Sept 16	8	1	0	8	1	0	8	1	0
Sept 17	8	-1	0	11	-1	0	11	-1	0
Sept 18	8	2	0	8	1	0	8	1	0
Sept 19	8	4	0	10	4	0.5	10	4	0.5
Sept 20	6	1	0.2	9	0	0	9	0	0.2
Sept 21	9	-1	0	11	0	0	11	-1	0
Sept 22	9	0	0	14	3	0	14	0	0
Sept 23	12	6	0	12	6	0	12	6	0
Sept 24	12	4	0	13	4	0	13	4	0
Sept 25	10	4	0	12	4	0	12	4	0
Sept 26	10	5	4.2	12	5	tr	12	5	4.3
Sept 27	8	3	0	10	4	0	10	3	0
Sept 28	8	1	0	8	1	0	8	1	0
Sept 29	5	-1	0	5	-2	0	5	-2	0
Sept 30	5	3	0				5	3	0
					Monthly Total				8.8
					Monthly Mean		11.2	2.7	0.29

Precipitation recorded as trace (tr) given value of 0.1 mm for calculating monthly totals and means.

Appendices

Water Quality Lab Reporting Sheets

Climate Daily Forms

NORWEST LABS

To: J. GIBSON & ASSOCIATES
Site 15, Comp 111, RR2
Whitehorse, Yukon *
Y1A 5W8

Attn: John Gibson

Re: Ice Samples

Workorder: 534
Received : 27-May-97
Completed: 06-Jun-97

ANALYSIS

OF

ENVIRONMENTAL SAMPLES

METHODOLOGY

Samples were analysed using procedures detailed in publications of the American Public Health Association, U.S Environmental Protection Agency, B.C. Ministry of the Environment, and Environment Canada - Conservation and Protection.

Dissolved metals were determined in a filtered (0.45 um) & acidified sample aliquot by UNICP-AES (EPA Method 200.15).

Total metals were determined in a sample aliquot which was acid digested in a closed teflon vessel in a microwave oven (EPA Method 3015). The digest was analyzed by UNICP-AES (EPA Method 200.15).

ACCREDITATION

Norwest Labs is accredited by the Canadian Association of Environmental Analytical Laboratories (CAEAL), by the Standards Council of Canada (SCC), and by Washington State Department of Ecology for specific tests. Norwest Labs is also registered in the B.C. Ministry of Environment Laboratory Registration Program.

To: J. GIBSON & ASSOCIATES W/O: 534 Page 1

Sample type Identification Lab Reference #	precipitn #1 534-001	precipitn #1 534-001	precipitn #2 534-002	precipitn #2 534-002	precipitn #3 534-003A
PHYSICAL PROPERTIES-ALKALINITY-					
hydroxide CaCO3	< 5.	-	< 5.	-	< 5.
carbonate CaCO3	< 5.	-	< 5.	-	< 5.
bicarb. CaCO3	58.	-	86.	-	67.
total alk. CaCO3	58.	-	86.	-	67.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
conduct. uS/cm	110.	-	190.	-	130.
pH	7.6	-	7.6	-	7.6
turbidity NTU	4.0	-	4.0	-	18.0
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	< 5.	-	14.	-	150.
dissolved 105C	121.	-	162.	-	125.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
nitrate N	< 0.1	-	< 0.1	-	< 0.1
nitrite N	< 0.5	-	< 0.5	-	< 0.5
sulfate	4	-	15	-	5
Results in	mg/L		mg/L		mg/L
NITROGEN					
ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
OSPHOROUS					
total reac PO4-P	0.017	-	0.025	-	0.025
Results in	mg/L		mg/L		mg/L

/2...

To: J. GIBSON & ASSOCIATES W/O: 534 Page 1

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	#1	#1	#2	#2	#3
Lab Reference #	534-001	534-001	534-002	534-002	534-003A
PHYSICAL PROPERTIES-ALKALINITY-					
hydroxide CaCO3	< 5.	-	< 5.	-	< 5.
carbonate CaCO3	< 5.	-	< 5.	-	< 5.
bicarb. CaCO3	58.	-	86.	-	67.
total alk. CaCO3	58.	-	86.	-	67.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
conduct. uS/cm	110.	-	190.	-	130.
pH	7.6	-	7.6	-	7.6
turbidity NTU	4.0	-	4.0	-	18.0
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	< 5.	-	14.	-	150.
dissolved 105C	121.	-	162.	-	125.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
nitrate N	< 0.1	-	< 0.1	-	< 0.1
nitrite N	< 0.5	-	< 0.5	-	< 0.5
sulfate	4	-	15	-	5
Results in	mg/L		mg/L		mg/L
NITROGEN					
ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
OSPHOROUS					
total reac PO4-P	0.017	-	0.025	-	0.025
Results in	mg/L		mg/L		mg/L

/2...

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	#1	#1	#2	#2	#3
Lab Reference #	534-001	534-001	534-002	534-002	534-003A
ICP - ULTRASONIC NEBULIZATION					
Method used	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED
TOTAL HARDNESS					
total hard CaCO3	63.8	70.3	94.2	111.	72.3
aluminum	0.04	0.67	0.02	0.29	0.02
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	0.03	< 0.02
barium	0.0640	0.0692	0.0471	0.0641	0.0757
beryllium	< 0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	16.7	17.3	22.7	26.2	15.5
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.005	0.009	0.004	0.008	0.004
iron	0.090	0.243	0.401	0.799	0.301
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	5.30	5.54	8.90	10.2	7.93
manganese	0.0042	0.0136	0.0338	0.0437	0.124
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.004	0.003	0.004	0.004	0.005
phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.9	0.7	0.8	1.1	0.9
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	2.37	2.65	2.78	3.26	2.63
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	0.70	0.74	2.41	2.67	0.80
strontium	0.045	0.047	0.067	0.078	0.050
sulfur	2.3	3.2	5.5	5.6	2.1
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	0.004	< 0.001	0.003	< 0.001
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	< 0.002	< 0.002	0.003	0.004	< 0.002
zinc	0.009	0.010	0.006	0.007	0.007
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

/3...

To: J. GIBSON & ASSOCIATES W/O: 534 Page 3

Sample type Identification Fraction Lab Reference #	precipitn #3 534-003A	precipitn #3 duplicate 534-003B	precipitn #3 duplicate 534-003B	precipitn #4 534-004	precipitn #4 534-004
PHYSICAL PROPERTIES-ALKALINITY-					
hydroxide CaCO3	-	< 5.	-	< 5.	-
carbonate CaCO3	-	< 5.	-	< 5.	-
bicarb. CaCO3	-	65.	-	88.	-
total alk. CaCO3	-	65.	-	88.	-
Results in		mg/L		mg/L	
PHYSICAL PROPERTIES					
conduct. uS/cm	-	130.	-	190.	-
pH	-	7.6	-	7.9	-
turbidity NTU	-	17.0	-	18.0	-
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	-	140.	-	66.	-
dissolved 105C	-	120.	-	162.	-
Results in		mg/L		mg/L	
ANIONS BY IEC					
nitrate N	-	< 0.1	-	< 0.1	-
nitrite N	-	< 0.5	-	< 0.5	-
sulfate	-	5	-	14	-
Results in		mg/L		mg/L	
NITROGEN					
ammonia N	-	< 0.05	-	< 0.05	-
Results in		mg/L		mg/L	
PHOSPHOROUS					
total reac PO4-P	-	0.030	-	0.029	-
Results in		mg/L		mg/L	

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To: J. GIBSON & ASSOCIATES W/O: 534 Page 4

Sample type Identification Fraction Lab Reference #	precipitn #3 534-003A	precipitn #3 duplicate 534-003B	precipitn #3 duplicate 534-003B	precipitn #4 534-004	precipitn #4 534-004
ICP - ULTRASONIC NEBULIZATION					
Method used	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS					
total hard CaCO3	94.1	71.8	108.	103.	114.
aluminum	1.63	0.02	2.34	0.01	0.67
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.174	0.0749	0.201	0.0712	0.120
beryllium	0.0003	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	17.1	15.4	18.7	22.3	23.2
chromium	0.005	< 0.001	0.007	< 0.001	0.004
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.019	0.004	0.017	0.005	0.031
iron	4.	0.300	4.	0.301	1.69
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	8.65	7.87	9.63	11.3	11.8
manganese	0.234	0.123	0.259	0.0507	0.139
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.011	0.004	0.014	0.005	0.011
phosphorus	0.22	< 0.06	0.21	< 0.06	0.09
potassium	0.9	0.9	1.0	0.7	0.8
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	5.04	2.60	6.61	3.27	4.28
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	0.85	0.81	0.89	1.22	1.24
strontium	0.053	0.047	0.058	0.069	0.073
sulfur	2.3	2.1	2.6	5.1	5.3
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	0.060	< 0.001	0.10	< 0.001	0.015
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.007	0.002	0.012	0.002	0.005
zinc	0.027	0.007	0.030	0.014	0.019
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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ample type Identification Lab Reference #	precipitn #5 534-005	precipitn #5 534-005	precipitn #6 534-006	precipitn #6 534-006	precipitn #7 534-007
PHYSICAL PROPERTIES-ALKALINITY-					
hydroxide CaCO3	< 5.	-	< 5.	-	< 5.
carbonate CaCO3	< 5.	-	< 5.	-	< 5.
bicarb. CaCO3	135.	-	39.	-	45.
total alk. CaCO3	135.	-	39.	-	45.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
conduct. uS/cm	340.	-	110.	-	115.
pH	8.2	-	7.7	-	7.6
turbidity NTU	4.0	-	52.0	-	43.0
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	6.	-	131.	-	88.
dissolved 105C	267.	-	98.	-	101.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
nitrate N	< 0.1	-	0.1	-	< 0.1
nitrite N	< 0.5	-	< 0.5	-	< 0.5
sulfate	44	-	14	-	14
Results in	mg/L		mg/L		mg/L
NITROGEN					
ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
)SPHOROUS					
total reac PO4-P	0.031	-	0.064	-	0.062
Results in	mg/L		mg/L		mg/L

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To: J. GIBSON & ASSOCIATES W/O: 534 Page 6

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	#5	#5	#6	#6	#7
Lab Reference #	534-005	534-005	534-006	534-006	534-007
ICP - ULTRASONIC NEBULIZATION					
Method used	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED
TOTAL HARDNESS					
total hard CaCO3	164.	194.	58.6	91.8	62.1
aluminum	< 0.01	0.09	0.22	3.3	0.18
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	0.02	< 0.02	< 0.02
barium	0.0551	0.0684	0.0541	0.298	0.0538
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	0.0014	< 0.0005
calcium	32.7	38.8	15.9	17.6	17.1
chromium	< 0.001	< 0.001	< 0.001	0.005	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	0.002	< 0.001
copper	0.003	0.042	0.005	0.034	0.005
iron	0.124	0.290	0.216	4.39	0.191
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	19.9	23.4	4.23	5.25	4.39
manganese	0.0185	0.0336	0.0031	0.142	0.0032
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.003	0.005	0.005	0.017	0.005
phosphorus	< 0.06	< 0.06	< 0.06	0.32	< 0.06
potassium	0.7	0.9	0.6	1.6	0.8
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	3.69	3.91	1.94	6.31	1.95
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	1.78	2.04	0.53	0.56	0.59
strontium	0.11	0.135	0.070	0.080	0.076
sulfur	17.4	21.7	4.9	5.2	5.0
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	0.001	0.005	0.034	0.004
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.003	0.004	0.003	0.029	0.004
zinc	0.007	0.013	0.014	0.124	0.014
zirconium	< 0.001	< 0.001	< 0.001	0.002	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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Sample type Identification Lab Reference #	precipitn #7 534-007	precipitn #8 534-008	precipitn #8 534-008
PHYSICAL PROPERTIES-ALKALINITY-			
hydroxide CaCO3	-	< 5.	-
carbonate CaCO3	-	< 5.	-
bicarb. CaCO3	-	67.	-
total alk. CaCO3	-	67.	-
Results in		mg/L	
PHYSICAL PROPERTIES			
conduct. uS/cm	-	140.	-
pH	-	7.3	-
turbidity NTU	-	2.0	-
PHYSICAL PROPERTIES-SOLIDS			
suspended 105C	-	< 5.	-
dissolved 105C	-	162.	-
Results in		mg/L	
ANIONS BY IEC			
nitrate N	-	< 0.1	-
nitrite N	-	< 0.5	-
sulfate	-	7	-
Results in		mg/L	
NITROGEN			
ammonia N	-	< 0.05	-
Results in		mg/L	
PHOSPHOROUS			
total reac PO4-P	-	0.031	-
Results in		mg/L	

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To: J. GIBSON & ASSOCIATES W/O: 534 Page 8

Sample type	precipitn	precipitn	precipitn
Identification	#7	#8	#8
Lab Reference #	534-007	534-008	534-008
ICP - ULTRASONIC NEBULIZATION			
Method used	uwave HNO3 TOTAL	filt. 0.45u DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS			
total hard CaCO3	81.8	84.5	81.3
aluminum	1.77	0.1	0.09
antimony	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02
barium	0.194	0.0381	0.0421
beryllium	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02
cadmium	0.0009	< 0.0005	< 0.0005
calcium	18.2	22.0	22.8
chromium	0.003	< 0.001	< 0.001
cobalt	0.001	< 0.001	< 0.001
copper	0.013	0.056	0.069
iron	3.	0.057	0.061
lead	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002
magnesium	5.07	6.26	6.45
manganese	0.0988	0.133	0.0150
molybdenum	< 0.005	< 0.005	< 0.005
nickel	0.013	< 0.002	0.003
phosphorus	0.23	< 0.06	0.06
potassium	1.2	0.9	1.2
selenium	< 0.02	< 0.02	< 0.02
silicon	4.15	7.69	8.15
silver	< 0.001	< 0.001	< 0.001
sodium	0.59	1.15	1.12
strontium	0.086	0.039	0.042
sulfur	5.3	4.0	4.0
thorium	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005
titanium	0.020	< 0.001	< 0.001
uranium	< 0.06	< 0.06	< 0.06
vanadium	0.014	< 0.002	0.003
zinc	0.085	0.017	0.018
zirconium	0.001	0.001	0.002
Results in	mg/L	mg/L	mg/L

Test results are for internal use only. Norwest liability is limited to the testing fee paid. Approved:

NORWEST LABS

To: J. GIBSON & ASSOCIATES
Site 15, Comp 111, RR2
Whitehorse, Yukon *
Y1A 5W8

Workorder: 1252
Received : 23-Sep-97
Completed: 01-Oct-97

Attn: John Gibson

Re: ICE Samples

ANALYSIS

OF

ENVIRONMENTAL SAMPLES

9938 - 67 AVENUE
EDMONTON, AB
T 6 E 0 P 5
TEL 403.438.5522
FAX 403.434.8586

To: J. GIBSON & ASSOCIATES W/O: 1252 Page 1

Sample type Identification Lab Reference #	precipitn ICE 1 1252-001	precipitn ICE 1 1252-001	precipitn ICE 2 1252-002	precipitn ICE 2 1252-002	precipitn ICE 2 DUP 1252-003A
PHYSICAL PROPERTIES-ALKALINITY-					
total alk. CaCO3	192.	-	169.	-	174.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
conduct. uS/cm	350.	-	365.	-	360.
pH	8.0	-	8.0	-	8.1
turbidity NTU	1.	-	2.	-	3.
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	< 5.	-	< 5.	-	< 5.
dissolved 105C	230.	-	268.	-	272.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
nitrate N	< 0.1	-	< 0.1	-	< 0.1
nitrite N	< 0.5	-	< 0.5	-	< 0.5
sulfate	22.6	-	37.7	-	36.9
Results in	mg/L		mg/L		mg/L
CYANIDE					
SAD cyanide	0.007	-	0.018	-	0.018
Results in	mg/L		mg/L		mg/L
NITROGEN					
ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
OSPHOROUS					
total reac PO4-P	< 0.005	-	< 0.005	-	< 0.005
Results in	mg/L		mg/L		mg/L

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To: J. GIBSON & ASSOCIATES W/O: 1252 Page 2

Sample type Identification Lab Reference #	precipitn ICE 1 1252-001	precipitn ICE 1 1252-001	precipitn ICE 2 1252-002	precipitn ICE 2 1252-002	precipitn ICE 2 DUP 1252-003A
ICP - ULTRASONIC NEBULIZATION Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED
TOTAL HARDNESS total hard CaCO3	201.	201.	205.	212.	203.
aluminum	< 0.01	< 0.01	< 0.01	0.10	0.01
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.159	0.161	0.0670	0.0723	0.0672
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	52.3	52.3	46.5	47.9	46.2
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.003	0.008	0.003	0.006	0.003
iron	0.018	0.023	0.116	0.390	0.121
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	17.2	17.2	21.5	22.2	21.4
manganese	0.0159	0.0162	0.0134	0.0230	0.0143
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	< 0.002	< 0.002	0.003	0.003	< 0.002
phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.6	0.9	0.6	0.7	0.7
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	4.21	4.27	2.80	2.96	2.80
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	2.10	2.12	5.90	5.94	5.83
strontium	0.131	0.133	0.145	0.150	0.141
sulfur	6.5	6.7	13.4	13.7	13.2
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	< 0.001	< 0.001	0.001	< 0.001
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.003	0.004	0.003	0.003	0.004
zinc	0.002	0.002	0.003	0.004	0.005
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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To: J. GIBSON & ASSOCIATES W/O: 1252 Page 3

Sample type Identification Fraction Lab Reference #	precipitn ICE 2 DUP 1252-003A	precipitn ICE 2 DUP DUPLICATE 1252-003B	precipitn ICE 2 DUP DUPLICATE 1252-003B	precipitn ICE 3 1252-004	precipitn ICE 3 1252-004
PHYSICAL PROPERTIES-ALKALINITY-					
total alk. CaCO3	-	-	-	178.	-
Results in				mg/L	
PHYSICAL PROPERTIES					
conduct. uS/cm	-	-	-	330.	-
pH	-	-	-	8.0	-
turbidity NTU	-	-	-	3.0	-
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	-	< 5.	-	< 5.	-
dissolved 105C	-	264.	-	236.	-
Results in		mg/L		mg/L	
ANIONS BY IEC					
nitrate N	-	-	-	< 0.1	-
nitrite N	-	-	-	< 0.5	-
sulfate	-	-	-	18.3	-
Results in				mg/L	
CYANIDE					
SAD cyanide	-	-	-	0.02	-
Results in				mg/L	
NITROGEN					
ammonia N	-	-	-	< 0.05	-
Results in				mg/L	
PHOSPHOROUS					
total reac PO4-P	-	-	-	0.010	-
Results in				mg/L	

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mple type	precipitn	precipitn	precipitn	precipitn	precipitn
identification	ICE 2 DUP	ICE 2 DUP	ICE 2 DUP	ICE 3	ICE 3
Fraction		DUPLICATE	DUPLICATE		
Lab Reference #	1252-003A	1252-003B	1252-003B	1252-004	1252-004
ICP - ULTRASONIC NEBULIZATION					
Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS					
total hard CaCO3	208.	208.	203.	182.	191.
aluminum	0.03	< 0.01	0.04	< 0.01	0.10
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.0688	0.0675	0.0679	0.138	0.141
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	46.2	47.1	46.1	39.2	40.7
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.003	0.004	0.005	0.003	0.004
iron	0.205	0.119	0.194	0.244	0.492
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	21.8	21.9	21.3	20.4	21.2
manganese	0.0180	0.0140	0.0178	0.0854	0.0940
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	< 0.002	< 0.002	< 0.002	< 0.002	0.003
phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.8	0.6	0.8	0.6	0.6
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	2.85	2.85	2.79	6.66	6.72
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	5.90	5.95	5.81	2.31	2.35
strontium	0.143	0.144	0.144	0.120	0.124
sulfur	13.8	13.7	13.2	5.4	5.6
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	< 0.001	< 0.001	< 0.001	0.006
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.004	0.003	0.003	0.003	0.003
zinc	0.005	0.004	0.007	0.001	0.003
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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Sample type Identification Lab Reference #	precipitn ICE 4 1252-005	precipitn ICE 4 1252-005	precipitn ICE 5 1252-006	precipitn ICE 5 1252-006	precipitn ICE 6 1252-007A
PHYSICAL PROPERTIES-ALKALINITY-					
total alk. CaCO3	188.	-	179.	-	103.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
conduct. uS/cm	380.	-	410.	-	260.
pH	8.4	-	8.2	-	8.3
turbidity NTU	3.0	-	2.0	-	2.0
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	< 5.	-	< 5.	-	< 5.
dissolved 105C	279.	-	317.	-	185.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
nitrate N	< 0.1	-	< 0.1	-	< 0.1
nitrite N	< 0.5	-	< 0.5	-	< 0.5
sulfate	33.1	-	57.7	-	41.2
Results in	mg/L		mg/L		mg/L
CYANIDE					
SAD cyanide	0.013	-	0.005	-	0.008
Results in	mg/L		mg/L		mg/L
NITROGEN					
ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
OSPHOROUS					
total reac PO4-P	< 0.005	-	< 0.005	-	< 0.005
Results in	mg/L		mg/L		mg/L

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Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	ICE 4	ICE 4	ICE 5	ICE 5	ICE 6
Lab Reference #	1252-005	1252-005	1252-006	1252-006	1252-007A
ICP - ULTRASONIC NEBULIZATION					
Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED
TOTAL HARDNESS					
total hard CaCO3	228.	235.	236.	244.	143.
aluminum	< 0.01	0.03	< 0.01	0.01	0.04
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.0927	0.0935	0.0662	0.0698	0.0700
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	46.2	47.3	46.7	47.4	38.8
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.004	0.011	0.003	0.009	0.005
iron	0.179	0.238	0.057	0.137	0.049
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	0.002
magnesium	27.5	28.2	30.0	29.5	11.0
manganese	0.0445	0.0542	0.0076	0.0371	0.0079
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.004	0.005	0.002	0.003	0.005
phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.9	0.9	1.	1.0	0.7
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	5.02	5.12	4.02	4.08	2.68
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	2.96	3.01	2.67	2.72	1.39
strontium	0.142	0.147	0.159	0.163	0.166
sulfur	12.0	12.2	19.2	19.4	14.6
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.003	0.003	0.003	0.004	0.002
zinc	0.002	0.007	0.004	0.005	0.015
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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To: J. GIBSON & ASSOCIATES W/O: 1252 Page 7

Sample type Identification Fraction Lab Reference #	precipitn ICE 6 1252-007A	precipitn ICE 6 DUPLICATE 1252-007B	precipitn ICE 6 DUPLICATE 1252-007B	precipitn ICE 7 1252-008	precipitn ICE 7 1252-008
PHYSICAL PROPERTIES-ALKALINITY-					
total alk. CaCO3	-	-	-	97.	-
Results in				mg/L	
PHYSICAL PROPERTIES					
conduct. uS/cm	-	-	-	260.	-
pH	-	-	-	8.1	-
turbidity NTU	-	-	-	2.0	-
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	-	-	-	< 5.	-
dissolved 105C	-	-	-	194.	-
Results in				mg/L	
ANIONS BY IEC					
nitrate N	-	-	-	< 0.1	-
nitrite N	-	-	-	< 0.5	-
sulfate	-	-	-	41.3	-
Results in				mg/L	
CYANIDE					
SAD cyanide	-	-	-	0.019	-
Results in				mg/L	
NITROGEN					
ammonia N	-	-	-	< 0.05	-
Results in				mg/L	
PHOSPHOROUS					
total reac PO4-P	-	-	-	< 0.005	-
Results in				mg/L	

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To: J. GIBSON & ASSOCIATES W/O: 1252 Page 8

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	ICE 6	ICE 6	ICE 6	ICE 7	ICE 7
Fraction		DUPLICATE	DUPLICATE		
Lab Reference #	1252-007A	1252-007B	1252-007B	1252-008	1252-008
ICP - ULTRASONIC NEBULIZATION					
Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS					
total hard CaCO3	147.	145.	148.	142.	146.
aluminum	0.17	0.04	0.21	0.04	0.04
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.0888	0.0703	0.0923	0.0697	0.0739
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005
calcium	39.5	39.6	39.9	38.5	39.6
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.007	0.004	0.005	0.004	0.004
iron	0.396	0.042	0.446	0.045	0.10
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	0.006	0.004	0.004	0.003	0.004
magnesium	11.2	11.2	11.3	11.0	11.2
manganese	0.0351	0.0082	0.0352	0.0076	0.0112
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.006	0.004	0.005	0.004	0.005
phosphorus	0.07	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.8	0.8	0.9	0.6	0.7
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	2.85	2.69	2.94	2.72	2.72
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	1.69	1.39	1.45	1.36	1.40
strontium	0.172	0.168	0.169	0.160	0.170
sulfur	14.8	14.8	14.9	15.0	15.3
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	0.002	< 0.001	0.002	< 0.001	< 0.001
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.004	0.003	0.005	0.003	0.003
zinc	0.028	0.012	0.028	0.011	0.014
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

Test results are for internal use only. Norwest liability is limited to the testing fee paid. Approved:

NORWEST LABS

To: J. GIBSON & ASSOCIATES
Site 15, Comp 111, RR2
Whitehorse, Yukon *
Y1A 5W8

Workorder: 893
Received : 21-Jul-97
Completed: 29-Jul-97

Re: Ice Property

ANALYSIS

OF

ENVIRONMENTAL SAMPLES

METHODOLOGY

Samples were analysed using procedures detailed in publications of the American Public Health Association, U.S Environmental Protection Agency, B.C. Ministry of the Environment, and Environment Canada - Conservation and Protection.

Dissolved metals were determined in a filtered (0.45 um) & acidified sample aliquot by UNICP-AES (EPA Method 200.15).

Total metals were determined in a sample aliquot which was acid digested in a closed teflon vessel in a microwave oven (EPA Method 3015). The digest was analyzed by UNICP-AES (EPA Method 200.15).

ACCREDITATION

Norwest Labs is accredited by the Canadian Association of Environmental Analytical Laboratories (CAEAL), by the Standards Council of Canada (SCC), and by Washington State Department of Ecology for specific tests. Norwest Labs is also registered in the B.C. Ministry of Environment Laboratory Registration Program.

9938 - 67 AVENUE
EDMONTON, AB
T6E 0P5

NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page

Sample type Identification Lab Reference #	precipitn ICE 1 893-001	precipitn ICE 1 893-001	precipitn ICE 1 (DUP) 893-002	precipitn ICE 1 (DUP) 893-002	precipitn ICE 2 893-003
PHYSICAL PROPERTIES-ALKALINITY-					
Hydroxide CaCO3	< 5.	-	< 5.	-	< 5.
Carbonate CaCO3	< 5.	-	< 5.	-	< 5.
Bicarb. CaCO3	160.	-	180.	-	< 5.
Total alk. CaCO3	160.	-	180.	-	124.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
Conduct. uS/cm	340.	-	330.	-	290.
pH	7.7	-	7.7	-	8.0
Turbidity NTU	< 0.5	-	< 0.5	-	4.6
PHYSICAL PROPERTIES-SOLIDS-					
Suspended 105C	5.	-	< 1.	-	34.
Dissolved 105C	223.	-	203.	-	227.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
Nitrate N	< 0.1	-	0.1	-	< 0.1
Nitrite N	< 0.5	-	< 0.5	-	< 0.5
Sulfate	19	-	19	-	26.9
Results in	mg/L		mg/L		mg/L
CYANIDE					
WAD cyanide	0.017	-	0.017	-	0.04
Results in	mg/L		mg/L		mg/L
NITROGEN					
Ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
PHOSPHOROUS					
Total reac PO4-P	< 0.005	-	0.005	-	0.007
Results in	mg/L		mg/L		mg/L
ICP - ULTRASONIC NEBULIZATION					
Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED
TOTAL HARDNESS					
Total hard CaCO3	183.	188.	191.	190.	150.
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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To: J. GIBSON & ASSOCIATES W/O: 893 Page

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	ICE 1	ICE 1	ICE 1 (DUP)	ICE 1 (DUP)	ICE 2
Lab Reference #	893-001	893-001	893-002	893-002	893-003
ICP - ULTRASONIC NEBULIZATION					
Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt DISSOLVED
aluminum	< 0.01	0.01	< 0.01	< 0.01	0.02
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.148	0.150	0.153	0.152	0.058
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.000
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.000
calcium	47.6	48.9	49.5	49.4	35.2
chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001	0.001	< 0.001
copper	0.003	0.005	0.004	0.005	0.005
iron	0.029	0.033	0.019	0.024	0.210
lead	< 0.005	< 0.005	< 0.005	0.013	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	0.003
magnesium	15.6	15.9	16.3	16.3	14.9
manganese	0.0121	0.0142	0.0127	0.0132	0.018
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	< 0.002	< 0.002	< 0.002	< 0.002	0.003
phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.5	0.4	0.5	0.5	< 0.2
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	3.87	3.98	4.03	4.01	2.30
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	1.90	2.32	1.99	2.00	4.45
strontium	0.122	0.127	0.128	0.129	0.113
sulfur	6.3	6.6	6.7	6.8	11.
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
uranium	< 0.06	< 0.06	< 0.06	0.08	0.06
vanadium	0.003	0.004	0.003	0.004	< 0.002
zinc	0.005	0.013	0.006	0.012	0.006
zirconium	< 0.001	< 0.001	< 0.001	< 0.001	0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page

Sample type Identification Lab Reference #	precipitn ICE 2 893-003	precipitn ICE 3 893-004A	precipitn ICE 3 893-004A	precipitn ICE 3 893-004B	precipitn ICE 3 893-004B
PHYSICAL PROPERTIES-ALKALINITY-					
hydroxide CaCO3	-	< 5.	-	-	-
carbonate CaCO3	-	< 5.	-	-	-
bicarb. CaCO3	-	173.	-	-	-
total alk. CaCO3	-	173.	-	-	-
Results in		mg/L			
PHYSICAL PROPERTIES					
conduct. uS/cm	-	300.	-	-	-
pH	-	8.2	-	-	-
turbidity NTU	-	8.9	-	-	-
PHYSICAL PROPERTIES-SOLIDS					
suspended 105C	-	19.	-	-	-
dissolved 105C	-	210.	-	-	-
Results in		mg/L			
ANIONS BY IEC					
nitrate N	-	< 0.1	-	-	-
nitrite N	-	< 0.5	-	-	-
sulfate	-	12.6	-	-	-
Results in		mg/L			
CYANIDE					
WAD cyanide	-	0.03	-	-	-
Results in		mg/L			
NITROGEN					
ammonia N	-	< 0.05	-	-	-
Results in		mg/L			
PHOSPHOROUS					
total reac PO4-P	-	0.032	-	-	-
Results in		mg/L			
ICP - ULTRASONIC NEBULIZATION					
Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS					
total hard CaCO3	191.	180.	184.	177.	185.
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	ICE 2	ICE 3	ICE 3	ICE 3	ICE 3
Lab Reference #	893-003	893-004A	893-004A	893-004B	893-004B
ICP - ULTRASONIC NEBULIZATION					
Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
aluminum	1.76	0.02	0.45	0.01	0.42
antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
barium	0.145	0.141	0.161	0.139	0.160
beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
cadmium	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
calcium	40.3	38.5	38.6	38.1	38.9
chromium	0.005	< 0.001	0.002	< 0.001	0.001
cobalt	0.002	< 0.001	< 0.001	< 0.001	< 0.001
copper	0.014	0.003	0.009	0.003	0.007
iron	6.	0.303	1.09	0.297	1.06
lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
lithium	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
magnesium	16.9	20.0	20.1	19.7	20.1
manganese	0.188	0.0889	0.123	0.0880	0.124
molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
nickel	0.008	0.003	0.005	< 0.002	0.004
phosphorus	0.23	< 0.06	< 0.06	< 0.06	< 0.06
potassium	0.9	< 0.2	0.3	< 0.2	0.5
selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
silicon	5.00	5.18	5.88	5.11	5.85
silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
sodium	4.85	2.24	2.28	2.22	2.26
strontium	0.130	0.121	0.127	0.118	0.124
sulfur	9.8	5.1	5.1	5.1	5.1
thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
titanium	0.021	< 0.001	0.023	< 0.001	0.020
uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
vanadium	0.009	0.004	0.006	0.003	0.007
zinc	0.047	< 0.001	0.015	0.004	0.016
zirconium	< 0.001	< 0.001	0.001	0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

/5..

NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page 5

Sample type Identification Lab Reference #	precipitn ICE 4 893-005	precipitn ICE 4 893-005	precipitn ICE 5 893-006	precipitn ICE 5 893-006	precipitn ICE 6 893-007
PHYSICAL PROPERTIES-ALKALINITY-					
Hydroxide CaCO3	< 5.	-	< 5.	-	< 5.
Carbonate CaCO3	< 5.	-	< 5.	-	< 5.
Bicarb. CaCO3	168.	-	137.	-	79.
Total alk. CaCO3	168.	-	137.	-	79.
Results in	mg/L		mg/L		mg/L
PHYSICAL PROPERTIES					
Conduct. uS/cm	330.	-	380.	-	210.
pH	8.1	-	8.1	-	7.9
Turbidity NTU	2.5	-	1.2	-	6.6
PHYSICAL PROPERTIES-SOLIDS					
Suspended 105C	6.	-	< 1.	-	6.
Dissolved 105C	263.	-	280.	-	143.
Results in	mg/L		mg/L		mg/L
ANIONS BY IEC					
Nitrate N	< 0.1	-	< 0.1	-	< 0.1
Nitrite N	< 0.5	-	< 0.5	-	< 0.5
Sulfate	34.5	-	53.1	-	36.9
Results in	mg/L		mg/L		mg/L
CYANIDE					
WAD cyanide	0.03	-	0.029	-	0.019
Results in	mg/L		mg/L		mg/L
NITROGEN					
Ammonia N	< 0.05	-	< 0.05	-	< 0.05
Results in	mg/L		mg/L		mg/L
PHOSPHOROUS					
Total reac PO4-P	0.010	-	0.013	-	0.018
Results in	mg/L		mg/L		mg/L
ICP - ULTRASONIC NEBULIZATION					
Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED
TOTAL HARDNESS					
Total hard CaCO3	205.	199.	217.	221.	119.
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

/6...

NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page

Sample type	precipitn	precipitn	precipitn	precipitn	precipitn
Identification	ICE 4	ICE 4	ICE 5	ICE 5	ICE 6
Lab Reference #	893-005	893-005	893-006	893-006	893-007
ICP - ULTRASONIC NEBULIZATION					
Method used	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL	field filt. DISSOLVED
Aluminum	< 0.01	0.08	< 0.01	0.02	0.05
Antimony	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Arsenic	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Barium	0.0899	0.0944	0.0663	0.0681	0.0651
Beryllium	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Bismuth	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Cadmium	< 0.0005	< 0.0005	0.0007	< 0.0005	< 0.0005
Calcium	40.7	39.2	43.0	43.7	32.6
Chromium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Cobalt	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.005	0.012	0.004	0.008	0.004
Iron	0.168	0.342	0.083	0.122	0.062
Lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Lithium	0.003	< 0.002	< 0.002	< 0.002	0.003
Magnesium	25.1	24.1	26.7	27.1	8.99
Manganese	0.0176	0.0705	0.0299	0.0249	0.0063
Molybdenum	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Nickel	0.003	0.005	< 0.002	< 0.002	0.003
Phosphorus	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Potassium	0.4	0.5	0.9	0.8	0.6
Selenium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Silicon	4.72	4.70	3.40	3.36	2.49
Silver	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Sodium	2.74	3.28	2.39	2.45	1.18
Strontium	0.133	0.132	0.152	0.154	0.139
Sulfur	12.3	12.1	18.5	17.7	12.5
Thorium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Tin	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Titanium	< 0.001	0.002	< 0.001	< 0.001	< 0.001
Uranium	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Vanadium	0.005	0.003	0.003	0.004	0.003
Zinc	0.008	0.006	0.01	0.007	0.036
Zirconium	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L	mg/L	mg/L

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To: J. GIBSON & ASSOCIATES W/O: 893 Page 7

Sample type Identification Lab Reference #	precipitn ICE 6 893-007	precipitn ICE 7 893-008	precipitn ICE 7 893-008
PHYSICAL PROPERTIES-ALKALINITY-			
hydroxide CaCO3	-	< 5.	-
carbonate CaCO3	-	< 5.	-
bicarb. CaCO3	-	89.	-
total alk. CaCO3	-	89.	-
Results in		mg/L	
PHYSICAL PROPERTIES			
conduct. uS/cm	-	210.	-
pH	-	7.9	-
turbidity NTU	-	6.5	-
PHYSICAL PROPERTIES-SOLIDS			
suspended 105C	-	16.	-
dissolved 105C	-	150.	-
Results in		mg/L	
ANIONS BY IEC			
nitrate N	-	< 0.1	-
nitrite N	-	< 0.5	-
sulfate	-	37.5	-
Results in		mg/L	
CYANIDE			
SAD cyanide	-	0.026	-
Results in		mg/L	
NITROGEN			
ammonia N	-	< 0.05	-
Results in		mg/L	
PHOSPHOROUS			
total reac PO4-P	-	0.015	-
Results in		mg/L	
ICP - ULTRASONIC NEBULIZATION			
Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
TOTAL HARDNESS			
total hard CaCO3	118.	116.	116.
Results in	mg/L	mg/L	mg/L

/8..

NORWEST LABS

To: J. GIBSON & ASSOCIATES W/O: 893 Page 8

Sample type	precipitn	precipitn	precipitn
Identification	ICE 6	ICE 7	ICE 7
Lab Reference #	893-007	893-008	893-008
ICP - ULTRASONIC NEBULIZATION-- Method used	uwave HNO3 TOTAL	field filt. DISSOLVED	uwave HNO3 TOTAL
aluminum	0.31	0.04	0.25
antimony	< 0.02	< 0.02	< 0.02
arsenic	< 0.02	< 0.02	< 0.02
barium	0.0815	0.0639	0.0766
beryllium	< 0.0002	< 0.0002	< 0.0002
bismuth	< 0.02	< 0.02	< 0.02
cadmium	0.0005	< 0.0005	< 0.0005
calcium	31.6	31.8	31.3
chromium	< 0.001	< 0.001	< 0.001
cobalt	< 0.001	< 0.001	< 0.001
copper	0.005	0.004	0.005
iron	0.441	0.043	0.358
lead	< 0.005	< 0.005	< 0.005
lithium	0.003	< 0.002	0.004
magnesium	8.83	8.85	8.77
manganese	0.0203	0.0053	0.0172
molybdenum	< 0.005	< 0.005	< 0.005
nickel	0.004	0.002	0.003
phosphorus	< 0.06	< 0.06	< 0.06
potassium	0.7	0.6	0.8
selenium	0.03	< 0.02	< 0.02
silicon	2.79	2.42	2.69
silver	< 0.001	< 0.001	< 0.001
sodium	1.10	1.13	1.14
strontium	0.140	0.136	0.137
sulfur	12.3	12.5	12.5
thorium	< 0.005	< 0.005	< 0.005
tin	< 0.005	< 0.005	< 0.005
titanium	0.003	< 0.001	0.003
uranium	< 0.06	0.07	0.06
vanadium	0.005	0.003	0.005
zinc	0.023	0.014	0.021
zirconium	< 0.001	< 0.001	< 0.001
Results in	mg/L	mg/L	mg/L

Test results are for internal use only. Norwest liability is limited to the testing fee paid. Approved:

Precipitation and Temperature Record

Station: Ice Property
Date: MAY 1997

Date	0700 hrs Precip (mm)	0700 hrs Max C	0700 hrs Min C	1900 hrs Precip (mm)	1900 hrs Max C	1900 hrs Min C	Comments
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24	0	+13	+1	0	11	2	NONE
25	0	+6	-2	1.8	4	-1½	snow
26	0	+3	-3	0	+5	-2	
27	0	+3	-2½	0	+9	-2	
28	0	+6	-4	0	+15	-3	
29	0	+21	+6	0	+18	+1	
30	0	+18½	-3½	0	+15	+5	
31	0.2	+13	+2	0	+20	+2	

Precipitation and Temperature Record

Station: Ice Property

Date: June 1997

Date	0700 hrs Precip (mm)	0700 hrs Max C	0700 hrs Min C	1900 hrs Precip (mm)	1900 hrs Max C	1900 hrs Min C	Comments
1	0	+17	+5	0	+16½	+6½	
2	0	+13	+2	0.1	+11	+3½	
3	Tr	13	2	0	+19	6	
4	0	16	7	Tr	16	+9	
5	6	13	7	0.4	14	7	
6	1.6	8	5	0.1	10	3½	rain in night
7	0	12	3	0	16	4	
8	0	10	2	0	16	2	
9	0	14	6	0	19½	4	
10	0	15	4	0.8	16	5	
11	0	19	8	0	25	12	
12	0	20	11	Tr	17	10	rain @ 7:00pm
13	1.3	13	5	0	15	6	
14	0	19	3½	0	19	7	
15	0.1	20½	6	0	19	6	
16	2.0	17	7	0.8	17	6	
17	3.5	12	6	Tr	19	6	am. rain + cloud
18	–	20	8	–	23	8	
19	14	15	7	5.4	21	8	-thunderstorm
20	0.9	13	9	–	25	6	
21	–	26	11	–	28	9	
22	1.8	26	11	3.2	21	11	-thunderstorm
23	8.8	16	8	/	20	8	-thunderstorm
24	/	21	12	/	21	11	
25	–	20	12	/	20	13	
26	–	20	9	/	19	8	
27	0.1	20½	8½	3.3	20	7	
28	1.0	12	7	1.4	14	6	
29	0.2	14	3½	–	19	4	
30							
31							

1 Day Missing Some place

Precipitation and Temperature Record

Station: Ice Property
Date: JULY 1997

Date	0700 hrs Precip (mm)	0700 hrs Max C	0700 hrs Min C	1900 hrs Precip (mm)	1900 hrs Max C	1900 hrs Min C	Comments
1	–	22	7	–	25	11	
2	–	24	12	0.1	25	15	
3	–	25	11	–	23	13	
4	1.2	25	9	–	22	7	
5	–	18	8	2.2	23	9	
6	–	19	9	Tr	23	10	
7	–	21	13	10.3	22	8	
8	4.6	16	3	Tr	15	9	
9	–	14	9	–	23	10	
10	–	24	11	1.0	23	11	
11	–	18	11	–	25	13	
12	1.0	25	9	–	20	10	
13	–	21	10		24	16	
14	–	24	11	Tr	21	10	
15	1.0	16	10	Tr	16	9	
16	0.6	16	8	3.6	14	9	
17	0.4	11	9	13.6	6	4	Rain all day
18	4.0	8	3	2.6	18	7	
19	–	12	6	–	17	9	
20	TR	18	6	TR	19	12	
21	–	16	7	–	25	7	
22	0.2	15	12	15.0	12	9	fogged in all day
23	12.8	11	7	7	9	6	JJ
24	1.5	9	6	Tr	14	6	
25	–	16	10	–	22	11	
26	–	21	13	–	22	15	
27	0.2	23	13	–	23	15	
28	–	23	12	–	24	14	
29	–	19	10	–	23	13	
30	1.8	21	8	10	20	9	
31							
	7.0	20	8	8.7	16	8	

Precipitation and Temperature Record

Station: Ice Property
Date: Aug 1997

Date	0700 hrs			1900 hrs			Comments
	Precip (mm)	Max C	Min C	Precip (mm)	Max C	Min C	
1	/	16	5	/	17	7	
2	/	17	5	/	17	6	
3	/	18	8	/	22	13	
4	/	21	10	/	23	13	
5	/	23	12	/	25½	13	
6	/	23	8	/	23	10	
7	/	20	8	1.0	18	16	
8	Tr	13	8	/	20	9	
9	tr	19	10	/	21	11	
10	/	17	10	/	24	11	
11	Tr	21	13	/	22	11	
12	0.5	18	9	2.3	14	9	
13	/	12	8	3.0	13	9	
14	12.8	14	7	Tr	15	6	
15	/	13	7	/	17	7	
16	/	17	7	/	19	9	
17	5.3	18	3	2.4	9	2	
18	2.6	8	4	/	10	5	
19	/	14	7	1.8	13	7	
20	/	13	5	/	16	6	
21	/	15	8	/	19	8	
22	/	17	7	/	13	7	
23	/	13	7	1.2	15	7	
24	/	13	9	/	13	9	
25	0.2	15	9	/	17	9	
26	/	17	9	1.2	19	9	
27	T.2	15	8	3	17	8	
28	/	13	10	/	15	10	
29	/	14	5	/	13	5	
30	/	14	4	/	15	5	
31	/	16	9	/	19	8	

Precipitation and Temperature Record

Station: Ice Property

Date: Sept 1997

Date	0700 hrs Precip (mm)	0700 hrs Max C	0700 hrs Min C	1900 hrs Precip (mm)	1900 hrs Max C	1900 hrs Min C	Comments
1	/	17	7	/	19	7	
2	/	16	7	/	17	6	
3	-	15	7	-	17	7	
4	/	15	7	/	18	7	
5	2	14	6	-	15	5	
6	/	11	3	/	14	3	
7	-	14	4	/	15	5	
8	1.6	14	6	/	17	7	
9	/	14	4				
10							
11							
12	2.8	15	4	Tr	8	3	
13	/	5	1	/	9	0	
14	Tr	8	1	-	9	1	
15	/	9	1	/	7	1	
16	/	8	1	/	8	1	
17	-	8	-1	/	11	-1	
18	/	8	2	-	8	1	
19	/	8	4	0.5	10	4	
20	0.2	6	1	-	9	0	
21	-	9	-1	/	11	0	
22	-	9	0	/	14	3	
23	/	12	6	/	12	6	
24	/	12	4	/	13	4	
25	/	10	4	/	12	4	
26	4.2	10	5	Tr	12	5	
27	/	8	3	/	10	4	
28	/	8	1	-	8	1	
29	0	5	-1	Snow	5	-2	
30	Snow	5	-3				
31							

UTEM SURVEY

ON THE

093869 3/5

ICE PROPERTY

Finlayson Lake/Pelly River Area N.T.S. 105 G/14W

Yukon Territory

Canada

377000E, 6863000N

NAD 27, GZD:9V

FOR

EXPATRIATE RESOURCES LTD.

SURVEY BY

SJ GEOPHYSICS LTD.

AND

LAMONTAGNE GEOPHYSICS LTD.

Dec., 1997

REPORT BY
Syd Visser
SJ Geophysics Ltd.

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SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.ca

INTRODUCTION

A large loop time domain electromagnetic (UTEM-3) survey was completed by SJ Geophysics Ltd. and Lamontagne Geophysics Ltd., for Expatriate Resources Ltd. on the Ice Property. The Ice property is located on the 105G/14W map sheet, 377000E, 6863000N NAD 27, GZD:9V in the Yukon Territory.

The UTEM-3 test survey followed up a maxmin survey and massive sulphides previously located by drilling. It also searched for new massive sulphide locations and helped aid in the mapping of the local geology.

Approximately 19.5 Km were surveyed from three loops during the period of July 15th to July 30th, 1997.

This report is meant to be an addendum to a geological report written by Expatriate Resources Ltd., therefore this report does not include location maps or any description of the area and its geology.

FIELD WORK

Zoran Dujakovic (Geophysicist), John Ashenhurst (Technologist) and Matthew Kowalczk (Student) all with SJ Geophysics Ltd. mobed, via helicopter, from Mink Creek into camp July 15th, 1997.

Whenever possible two receivers were used to survey from one transmitter setup to speed up the survey. Approximately 19.5 Km were surveyed from 3 loops using a station spacing of 25m and line spacings of either 100m or 50m. The first loop was placed around the known mineralization to couple with the flat lying conductor. Surveying took place inside this first loop. Two more loops were laid out to the east and west to couple with the dipping westerly and easterly conductors respectively. In these two cases, surveying took place outside the loops. The usual Hz component was surveyed but also the Hx component was surveyed to help facilitate the field interpretation.

Field plots were faxed to the Vancouver office a number of times during the survey period. The crew demobed from camp on July 30th, 1997.

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

DESCRIPTION OF UTEM SYSTEM

UTEM is an acronym for "University of Toronto ElectroMagnetometer". The system was developed by Dr. Y. Lamontagne (1975) while he was a graduate student of that University.

The following is a short description of the UTEM system used in the field. A paper (A time-domain EM system measuring the step response of the ground) by G.F. West, J.C. Macnae, and Y. Lamontagne, giving a more complete description with an overview of interpretations is located in Appendix III.

The field procedure consists of laying out a large loop of single strand insulated wire, which can vary in size from less than 100M X 100M to more than 2Km X 2Km, and energizing it with a current from a transmitter which is powered by a 2.2 kW motor generator. During a surface survey the lines are generally oriented perpendicular to one side of the loop. Surveying can be performed both inside and outside the loop. For a Borehole Survey the sensor coil is placed down the borehole measuring the axial component of the electromagnetic field from a minimum of 2 separate loops.

The transmitter loop is energized with a precise triangular current waveform at a carefully controlled frequency (30.97 Hz for this survey). The receiver system includes a sensor coil and backpack portable receiver module which has a digital recording facility. The time synchronization between transmitter and receiver is achieved through quartz crystal clocks in both units which are accurate to about one second in 50 years.

The receiver sensor coil measures the vertical, horizontal, or axial magnetic component of the electromagnetic field and responds to its time derivative. Since the transmitter current waveform is triangular, the receiver coil will sense a perfect square wave in the absence of geologic conductors. Deviations from a perfect square wave are caused by electrical conductors which may be geological or cultural in origin. The receiver stacks any pre-set number of cycles in order to increase the signal to noise ratio.

The UTEM receiver gathers and records 10 channels of data at each station occupied. The higher number channels (7-8-9-10) correspond to short time, or high

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

frequency while the lower number channels (1-2-3) correspond to long time, or low frequency. Poor or weak conductors will respond on channels 10, 9, 8, 7 and 6. Progressively better conductors will give responses on progressively lower number channels. For example, massive, highly conducting sulfides or graphite will produce a response on all ten channels.

The Borehole system consists of a normal surface UTEM-3 transmitter and receiver along with special receiver coil (1 1/4" in diameter). The coil is connected to the receiver through a controller and fibre optic cable.

DATA PRESENTATION

The results of the UTEM survey are presented on 60 data sections (Appendix IV) and one compilation map, Plate G1 (Map Pocket).

Legends for the UTEM data sections are attached, see Appendix II.

In order to reduce the field data the theoretical primary field of the loop must be computed at each station. The normalization of the data is as follows:

a) For Channel 1:

% Ch.1 anomaly = (Ch.1 - PC) X 100/PT

Where:

PC is the calculated primary field in the direction of the component from the loop at the occupied station

Ch.1 is the observed amplitude of Channel 1

PT is the calculated total field

b) For remaining channels (n = 2 to 9)

% Ch.n anomaly = (Ch.n - Ch.1) X 100/Ni

where:

Ch.n is the observed amplitude of Channel n (2 to 9)

N is Ch1 for Ch1 normalized

N is PT for primary field normalized

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

i is the data station for continuous normalized (each reading normalized by a different primary field)

i is the station below the arrow on the data sections for point normalized (each reading normalized by the same primary field)

Subtracting channel 1 (Ch.1) from the remaining channels eliminates the topographic errors from all the data except channel 1. If there is a response in channel 1 from a conductor then that value must be added to do a proper conductivity determination from the decay curves. Therefore, channel 1 should not be subtracted indiscriminately.

The data collected outside the loops for each line is plotted on at least 2 separate sections consisting of a continuous normalized section and a point normalized section. Point normalization data is the absolute secondary field at a "gain setting" related to the normalization point. The data is usually point normalized over the central part of the crossover anomaly to aid in interpretation.

DISCUSSION

The first loop was placed around the known mineralization to maximize the coupling of the transmitted primary field with the relatively flat lying conductor. This loop also minimized coupling with the near vertical fault. This conductive fault was located with a previous HLEM (maxmin) survey. Modeling indicated that a 100mho conductor with a depth extent of 50m, striking greater than 100m and located at a depth of 50m should give a response of greater than 10% down to UTEM channel 4.

Inside the loop surveying indicated relatively weak conductors across the survey area, most were restricted from lines 10900N to 11500N. Because of these weak conductors, it was decided to locate a loop to the west to couple with the easterly dipping conductors and a loop to the east to couple with the westerly dipping conductors. The responses from these loops did not locate any strong conductors although some current channeling was noted.

Current channeling occurs when the current flowing in the host rock is channeled into a conductor. The amplitude of a current channeling anomaly is much larger than from a purely inductive response anomaly. A current channeling anomaly decays very rapidly and is usually only seen at the time the current in the host rock passes the area of the conductor. A very good example of a current channeling

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

anomaly is seen on channels 6 and 7 in the Hz component, on line 11300N at approximately 10050E from loop 2.

The response from all the loops indicated a relatively good conductive zone striking north across the grid from approximately 10900N, 10000E to approximately 11500N, 10100E as shown on the compilation map, Plate G1.

A conductor on lines 10900N, 11000N and possibly 11100N appears to be dipping to the east. The results from loop 2 indicate a current channeling anomaly at 11000N, 10000E and possibly a weak anomaly at 11000N, 10100E. This second anomaly has very low amplitude suggesting a small conductor at this location.

Another larger conductor is located on line 11100N between 9900E and 10000E. This conductor extends to approximately 11500N, 10100E, it appears to be very shallow, dipping to the west with the most conductive region located from lines 11100N to 11300N. The conductor on line 11300N is a typical current channeling anomaly and is likely due to massive sulphides. The remainder of this conductive zone appears to respond to a westerly dipping fault. It is not clear why this fault should be more conductive in the mineralized area. The response therefore appears to be related to the mineralization. The conductive fault appears to extend north of line 11500N to line 12000N. The conductivity of this fault is very weak and difficult to trace possibly because it was only surveyed inside loop1. A number of other very weak conductors or contacts are located in the survey area as shown on the compilation map.

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

RECOMMENDATIONS

The UTEM survey located a conductive fault possibly associated with the mineralization. The survey also suggested at least two other mineralized locations (line 11000N and 10300N). The responses are not as conductive or clear as anticipated based on known the mineralization and computer modeling. It is therefore recommend to perform resistively measurements on the core to determined the physical properties.

Because the mineralization appears to be only weakly conductive it may respond better to an induced polarization survey. Since there is a near surface response from the fault, it is recommended to perform a close spaced test survey with 25m dipoles for the first few dipoles and expanding to 50m dipoles to achieve the required depth penetration.

Using the IP test survey results, it can then be determined which methods are best suited to search the region for similar deposits.

CONCLUSIONS

The UTEM response did not indicate any strong conductors over the mineralized zone as expected from the modeling and ohm-meter measurements taken from the core. The survey results did indicate that the fault, which crosscuts the mineralization, is much more conductive within the mineralization than away from it. Using the fault, it is possible to detect the mineralized zone indirectly. There are current channeling anomalies located on three lines indicating possible direct detection of mineralization in these locations.

Syd J. Visser, P.Geo

Geophysicist
SJ Geophysics Ltd.

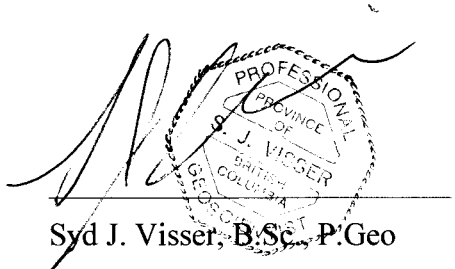
SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

APPENDIX I

Statement of Qualifications

I, Syd J. Visser, of 11762 - 94th Avenue, Delta, British Columbia, hereby certify that,

1) I am a graduate from the University of British Columbia, 1981, where I obtained a B.Sc. (Hon.) Degree in Geology and Geophysics.
2) I am a graduate from Haileybury School of Mines, 1971.
3) I have been engaged in mining exploration since 1968.
4) I am a professional Geoscientist registered in British Columbia.



Syd J. Visser, B.Sc., P.Geo
Geophysicist

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

APPENDIX II

Legend

UTEM SYSTEM MEAN DELAY TIME

Channel Number	Delay Time(msec)	Symbol
1	12.8	|
2	6.4	╲
3	3.2	╲
4	1.6	□
5	0.8	▽
6	0.4	△
7	0.2	▽
8	0.1	×
9	0.05	△
10	0.025	◇

Base Frequency = 31 Hz

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tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

APPENDIX III

A time domain EM system measuring the step response of the ground

SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca

GEOPHYSICS, VOL. 49, NO. 7 (JULY 1984); P. 1010-1026, 26 FIGS.

A time-domain EM system measuring the step response of the ground

G. F. West*, J. C. Macnae*‡, and Y. Lamontagne‡

ABSTRACT

A wide-band time-domain EM system, known as UTEM, which uses a large fixed transmitter and a moving receiver has been developed and used extensively in a variety of geologic environments. The essential characteristics that distinguish it from other systems are that its system function closely approximates a step-function response measurement and that it can measure both electric and magnetic fields. Measurement of step rather than impulse response simplifies interpretation of data amplitudes, and improves the detection of good conductors in the presence of poorer ones. Measurement of electric fields provides information about lateral conductivity contrasts somewhat similar to that obtained by the gradient array resistivity method.

INTRODUCTION

This article describes the design of the UTEM system and its development at the Geophysics Laboratory of the University of Toronto by Y. Lamontagne and G. F. West from 1971 to 1979. UTEM is a wideband, time-domain, ground EM system with a step-function system response. It was designed to try to achieve the sensitivity and interpretability necessary to handle problems of deep exploration, conductive environments, and a variety of terrain conditions, in an economically viable manner. As with most EM systems, effective exploration for massive sulfide ores was the principal objective. The method was conceived in 1971, and the first UTEM I instrument was operational in 1972. It was an analog electronic system, and was used in a number of surveys which have been described by Lamontagne (1975). An improved UTEM II which incorporated a digital recording system was then designed and constructed at the University of Toronto with financial aid from a consortium of mining companies. It was first used in 1976. To fall 1980, about 1000 line-km had been surveyed with the system from 144 loops in 35 areas. UTEM III, which is a microprocessor-controlled system with expanded capabilities, is now produced commercially by Lamontagne Geophysics Ltd. Some of the field results obtained using the UTEM II system have been described in Lamontagne et al. (1977, 1980), Macnae (1977, 1980, 1981), Lodha (1977), and Podolsky and Slankis (1979). Data from all three UTEM systems are identical insofar as geophysical characteristics are concerned. The differences affect only data noise levels and operational convenience. Some of the noise rejection features of UTEM III are discussed by Macnae et al. (1984).

THE UTEM SYSTEM

Design philosophy

UTEM uses a large, fixed, horizontal transmitter loop as its source. The field of the loop is mapped in the quasi-static zone with the receiver system; the vertical component of the magnetic field is always measured, and in some circumstances the horizontal magnetic and electric field components may be measured as well (Figure 1). The size of the transmitter loop depends on the prospecting problem; loops may range from about 2 km × 1 km in resistive terrain to 300 m × 300 m in a conductive area. Lines are typically surveyed to a distance of 1.5 to 2 times the loop dimensions.

The large loop transmitter-field mapping receiver configuration was chosen in order to give the system the deepest possible exploration for orebody sized conductors, without sacrificing the ability to resolve shallower structures (depth < 50 m). This dictates a very large transmitter moment, and makes an extended source desirable. The virtue of an extended source is that the coupling between the source and a receiver or the source and a nearby conductive zone is not so many orders of magnitude larger than the coupling to a distant receiver or deep target as is the case with a confined source.

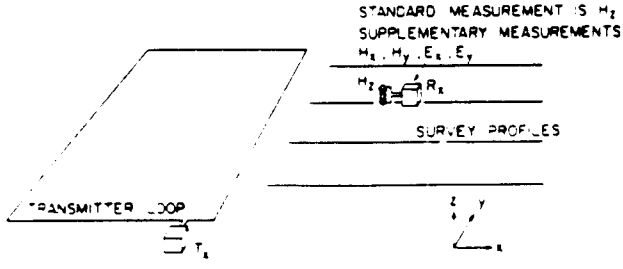

FIG. 1. Schematic layout of a UTEM survey.

Manuscript received by the Editor November 1983; revised manuscript received December 1983.
*Geophysics Lab., Dept. of Physics, Univ of Toronto, Ont., Canada M5S 1A7.
‡Lamontagne Geophysics, 740 Spadina Ave., Toronto, Ont., Canada M5S 2J2.
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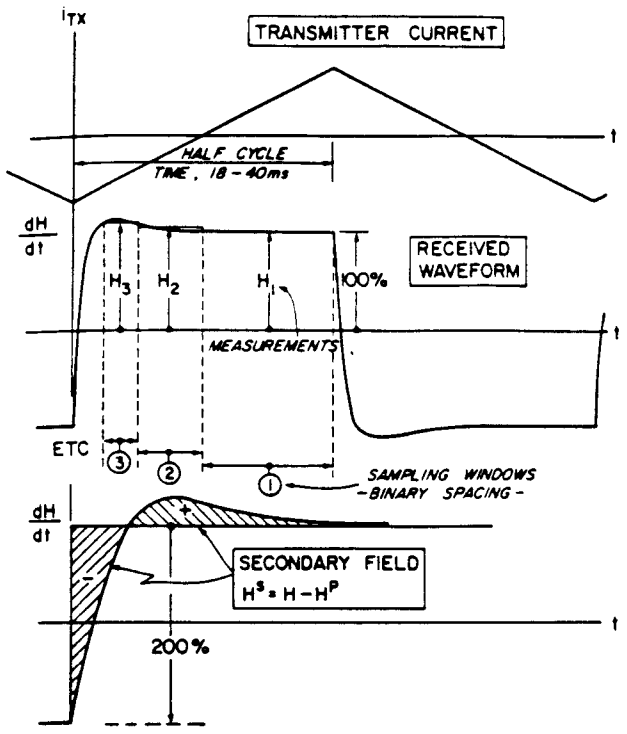

FIG. 2. Transmitted and received UTEM waveforms. Note that the measurement channels are numbered from the latest to the earliest. Sampling is repeated, with due regard to sign, in every half-cycle.

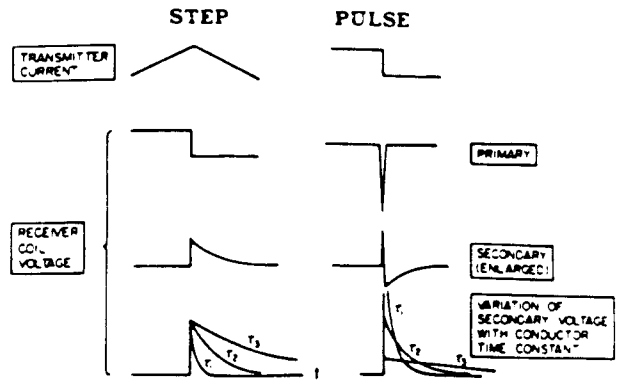

FIG. 3. Comparison of transient signals in step and pulse type systems.

Given a large transmitter and a large Tx-Rx separation, it is inevitable that induction in extensive conductive overburden and in large formational conductors will contribute more to the response than with a small scale system. Also, as the separation becomes larger it becomes increasingly likely that the system will be responding to several nearby conductors at once. However, a fixed transmitter-moving receiver system offers a basis for separating the signal contributions from the various conductors and resolving the geometry of deep-seated conductors. At any time instant, the magnetic field of the current system induced in the ground is a potential field (within the quasi-static zone), and if it is mapped on a profile or over a surface, there is a firm theoretical basis for separating it into parts and estimating the current systems which caused it. When the transmitter and hence the eddy current system move for each observation, it is more difficult to find a theoretical basis for stripping of responses into component parts.

There are negative aspects to using a fixed transmitter method. In addition to the aforementioned enhancement of anomalies due to formational conductors, the transmitter can be positioned badly for induction in small plate-like conductors, and a large good conductor can screen a smaller, shorter time-constant conductor which lies behind it. For these reasons it may be desirable to have survey coverage from more than one transmitter location.

The UTEM II transmitter passes a low-frequency current of precise triangular waveform through the transmitter loop. The magnetic field is sensed with a coil, which responds to the time derivative of the local magnetic field, so in "free space" a precise square-wave voltage would be induced in the receiver. In the presence of conductors the waveform is substantially distorted. The UTEM receiver measures this distortion by determining amplitudes at 10 delay times (actually, averages over time windows) which are spaced in a binary geometric progression between the waveform transitions. The sample scheme is shown in Figure 2. Note that the UTEM channel numbers are conventionally numbered in reverse order of time. This is because the latest time measurement often serves as a reference to which the other measurements are compared, whereas the number of earlier time measurements which can be made accurately may change if base period or instrument bandwidth is altered. The base frequency of the system is selectable, usually about 30 or 15 Hz (25 or 12.5 Hz in countries with 50 Hz power). A common practice is to set the base frequency (adjustable in 0.1 percent steps) about 0.5 Hz from a subharmonic of the power line in order that power line interference can be detected by slow beating in the data. The base frequency is usually set low enough that all ground response has nearly vanished by the end of the half-cycle. When this is the case, the UTEM system determines the step response of the ground in the time range 25μs to 12.8 ms (30 Hz base frequency).

Time-domain systems

Time-domain systems have some advantage over frequency-domain systems in that simultaneous measurement is easier to achieve over the whole spectrum and, at the same time, it is possible to check the phase synchronization of the transmitter and receiver time bases. Most time-domain systems employ an on-off type of transmitter current and confine all measurements to the off period, as this automatically separates the secondary from the primary field. However, when a coil is used as a sensor, the time derivative of the signal is observed. Thus, if the transmitter loop is energized with a step current, it is the impulse response of the ground which is observed.

When prospecting for conductive mineral deposits, it is generally more desirable for interpretation purposes to observe the step response than any other time response. The reason for this lies in the characteristics of eddy current decay. For the step

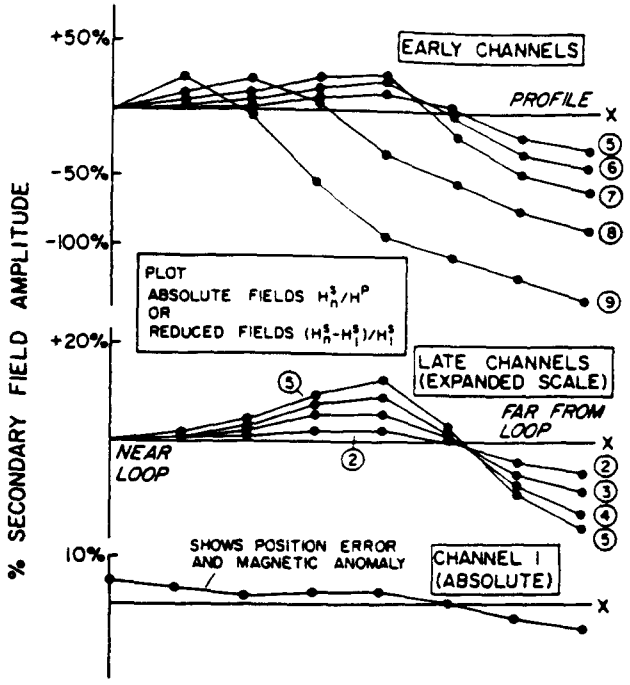

FIG. 4. Standard presentation of UTEM vertical component magnetic field data.

response, the early-time limit of response is identical to the frequency-domain inductive limit, and for a simple conductor in free space this is a function of geometry alone. For the impulse response, the early time limit is scaled from the step response limit by the inverse of the transient decay time constant (Figure 3). Thus, the decay rate must first be determined in order to interpret amplitude information in terms of geometry. This may present little difficulty in simple cases, but when complex or overlapping responses are observed it can be a serious problem. Also, even in the case of the step response, overburden anomalies which generally are of short time constant have early time amplitudes which are very much larger than the anomalies of target conductors with long time constant. Any further amplification caused by measuring the impulse rather than step response is clearly undesirable.

Although a system with a step response is usually desirable for interpretation purposes, the UTEM system is only one implementation of such a system. In fact a system using a magnetometer receiver with a square-wave transmitter instead of an induction coil (referred to as MSW system in the following sections) would have an identical system response. The foregoing rationale of the interpretational advantages of step response does not consider the other important factors which enter the design of actual systems such as signal-to-noise (S/N) efficiency and transmitter-sensor design constraints which in fact guide the choice of the actual transmitter waveform and sensor used. This is a complex topic discussed by Lamontagne et al. (1980). For example, the UTEM III system actually uses a modified triangular transmitter waveform and deconvolution in the receiver to improve its S/N performance but has a system response identical to the UTEM I and UTEM II systems (Macnae et al., 1984), i.e., a square-wave response. Thus the UTEM I/II systems, the conceptual MSW system, and the UTEM III system all make identical measurements although they excite the ground differently. To avoid any confusion, discussions in this paper of actual induced current waveforms in the ground will be limited to the UTEM system with a purely triangular waveform and to the MSW system.

The sampling scheme of Figure 2 was chosen so that virtually all measuring time is utilized and time scaling of the measurements is permitted. In the frequency domain, inductive responses may be characterized by dimensionless parameters of the form

$$\theta_f = \sigma\mu\omega L^2,$$

which demonstrates that scale changes of conductivity, frequency or (length)^2 are equivalent to one another. The analogous parameter for the time domain is

$$\theta_t = \sigma\mu L^2/t.$$

In interpreting frequency-domain data, it is common to compare observed frequency response data with dimensionless model response data. This is convenient because it avoids the necessity of rescaling the model data for all frequencies and physical scale lengths that might be encountered in the field cases. The same sort of scaling is possible with time-domain data, but only if the system function of the apparatus is a pure discontinuity response. If this is not the case, for instance when the apparatus has a characteristic ramp shut-off time, model response curves cannot be rescaled in time to match field data as this would imply rescaling the shut-off time to a value different from that used by the apparatus.

To ensure that time scaling can readily be applied to data that have been sampled and averaged over a time window, it is also necessary that the window widths be proportional to time after the discontinuity. UTEM has such sampling. It should be noted that time scaling may only be applied to UTEM anomalous responses which are short enough so as to have vanished in the interval between the two successive transitions of the step which form the square wave.

Data presentation

Because the field intensity falls off rapidly with increasing distance from the transmitter loop, it is often desirable to normalize the secondary field observations in some manner. One suitable normalizing factor is the primary vertical magnetic field signal (H_z^p). If the positions of the transmitter loop and the receiver are known reasonably accurately, a calculated value of H_z^p may be employed. If the ground response vanishes by late time, the channel 1 measurement is a direct measure of H_z^p. Normal survey data plotting practice encompasses both procedures.

Figure 4 is an example of a standard plot of UTEM secondary vertical magnetic field data (H_z^s). Channel 1 is plotted as secondary field (Ch 1-H_z^p)/H_z^p (where H_z^p is the calculated primary field) and all other channels are normalized to Ch 1 [(Ch n-Ch 1)/Ch 1] to correct for any position error in calculation of H^p and also to remove the effect of induced magnetic anomalies (for further details see Lamontagne, 1975). The late channels on the example plot show a crossover type of anomaly, indicative of a concentration of (changing) induced current, as will be discussed. The amplitude variation with channel number indicates that these induced currents are decaying with

time. A small component of response appears to have persisted to Ch 1 and, for quantitative analysis, it should be remembered that the data reduction process will have caused subtraction of this amount from profiles of Ch 2-Ch*n*. On the early-time channels, the migration of crossover location from one channel to another indicates that the secondary current flow at these times is not fixed in geometry, a characteristic which is indicative of an extensive conductor (here extensive overburden) rather than a localized conductor such as that responsible for the late time crossovers.

Since at any delay time, the secondary field is a potential field, interpretation of geometrically fixed current systems is best performed using absolute secondary fields normalized by the primary field intensity at a single point rather than continuously along the profile. Although only one case presented in this paper has this absolute or "point normalization," recent routine field practice is to point normalize all survey profiles exhibiting discrete anomalies, in order to simplify interpretation.

Horizontal magnetic field measurements may be made by reorienting the receiver coil. Normalization is done using the vertical primary magnetic field (calculated or vertical Ch 1 measurement). Unfortunately, horizontal field measurements frequently suffer a somewhat higher noise level than vertical fields, due to the predominantly horizontal orientation of sferic interference.

The electric field waveform is, like the voltage from the coil sensor, a square wave if the ground is very resistive. It is distorted in much the same way as the coil signal when the ground is conductive. Electric field observations are usually plotted as E_i/E_T^p—the observed channel voltage between the electrodes divided by the maximum expected late time voltage between electrodes at the observation point in any horizontal direction, i.e., $E_T^p = (E_x^{p2} + E_y^{p2})^{1/2}$. "Expected" here refers to the electric field produced by a loop on a laterally uniform, resistive half-space. This normalization facilitates intercomparison of x and y component data. The geologic noise level in electric field data is usually high, so plotting on expanded scales is rarely justified. All channel data are usually plotted on the same axes, as shown in Figure 5.

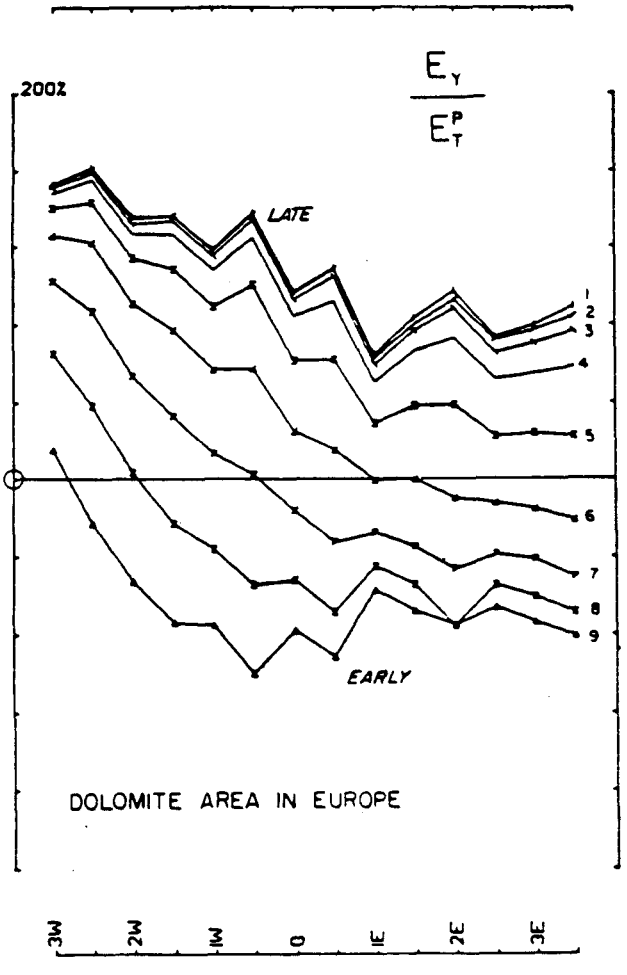

FIG. 5. Standard presentation of electric field data. The observed component is normalized to the total primary electric field of the transmitter loop.

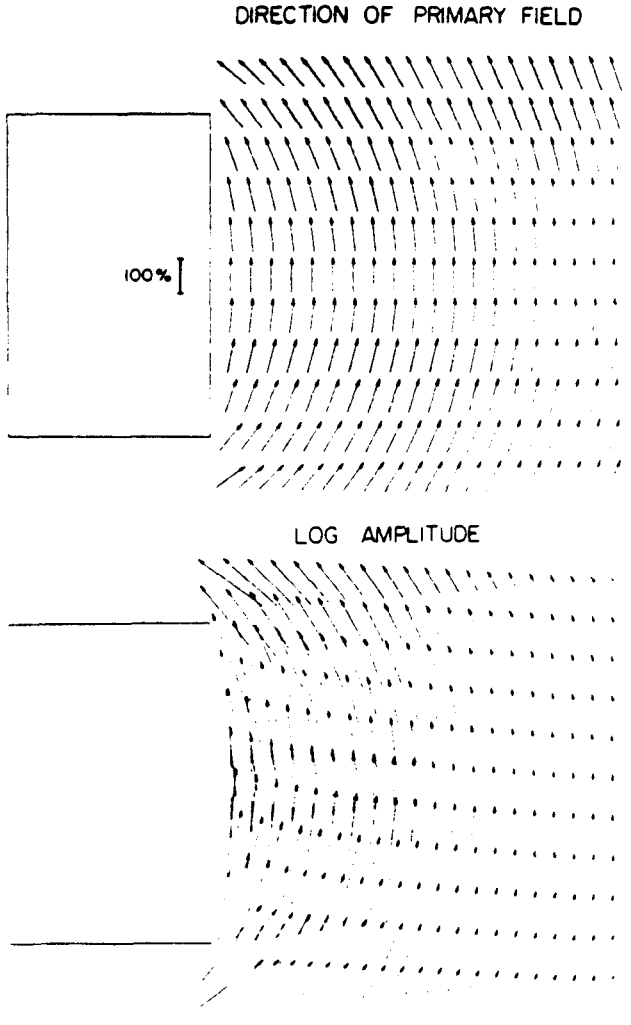

FIG. 6. Vector plots of late time electric field. (a) Direction information only. (b) Showing direction and intensity of the primary field.

The reference state for electric field data is usually described as a "laterally uniform, resistive half-space," rather than free space. By resistive is meant a case where all inductive transients have died out. The free-space electric field of a horizontal loop is horizontal, so introduction of a resistive half-space does not affect the field. However, for any other orientation of the transmitter loop or the earth-air interface, the free-space electric field will be directed across the interface and a strong distortion of the field will occur. Since the conductivity of air is virtually zero, the earth-air interface almost always has a high conductivity ratio, even if the earth is resistive in terms of induction. The charge which arises on the interface essentially doubles the vertical component of the E field in the air near the boundaries and annuls the vertical component in the ground. Thus the E field in the ground is (almost always) virtually horizontal. The nomenclature for the reference state serves to remind one that the earth-air interface has an important role in the physics of the electric field and is always assumed to be present, but no lateral inhomogeneity or induction is permitted in the reference model.

The electric field of a heterogeneous, conductive earth does normally become constant at late time, as the EM transients vanish. At the same time, the rate of change of magnetic field becomes constant. However, the observed late-time E limit is usually found to be different from the free-space or uniform resistive half-space value, due to lateral inhomogeneity of the earth's conductivity structure. The late-time electric field around a loop greatly resembles what might be seen in a gradient resistivity survey. The field weaves about, deflected around the more resistive areas and through the more conductive ones. A vector display of the late-time E field is an interesting reflection of the *relative* conductivity of various parts of the ground. It is impractical to plot the unnormalized E vectors, since the true field intensity falls off rapidly with increasing distance from the loop. The lengths of the plotted vectors are therefore proportioned to the normalized field of the loop, as for profile plots. Vector plots of the free-space field of a loop are shown in Figure 6. Examples of field data are given in the following section.

Errors caused by the presence of EM noise or by poor geometrical control are discussed for the magnetic (H) field case in Lamontagne (1975). For the electric (E) case, details of the measurement and sources of error are discussed in appendix G of Macnae (1981). As in the dc resistivity method, topographic features can seriously distort local electric fields, and local conductivity contrasts such as overburden patches and minor lithological changes can have quite large effects on the amplitude of measured E fields.

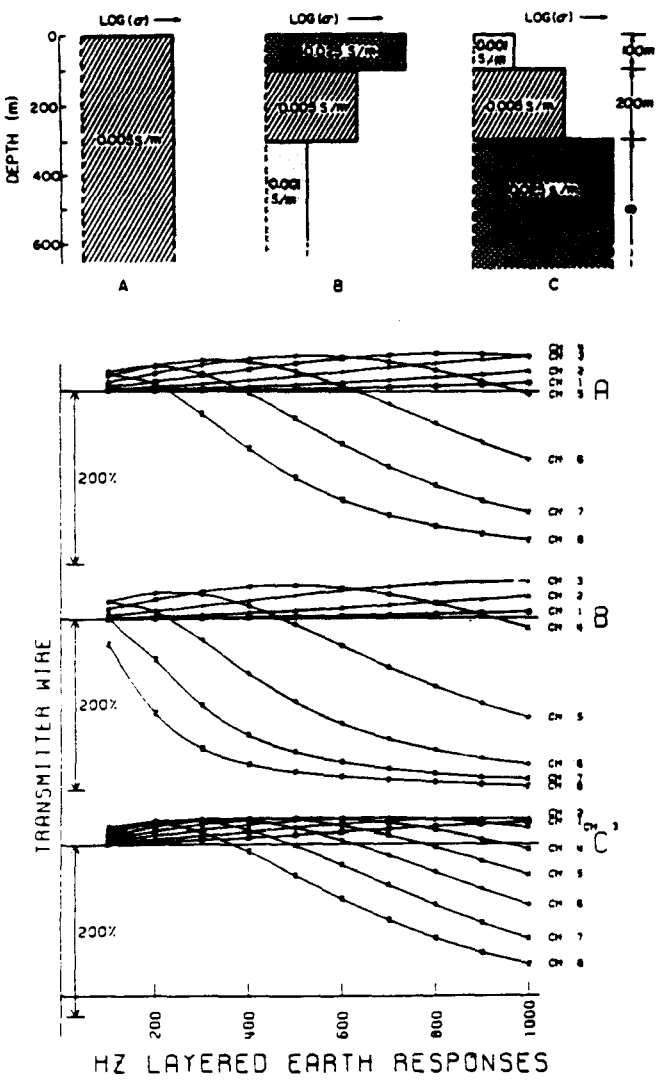

FIG. 7. UTEM layered earth response.

INTERPRETATION

We shall describe briefly the responses from a number of simple geologic models and how these can be identified and interpreted.

Layered earth responses

The problem of EM induction in a layered earth is very well treated in the literature, particularly for frequency-domain systems (e.g., Wait, 1962). Time-domain cases have also been studied for some specific problems, for example the infinite thin sheet was solved by Maxwell (1891) and the half-space response is discussed by Nabighian (1979). A general, layered earth solution for UTEM geometry and waveforms was given in Lamontagne (1975). Figure 7 shows three examples of computed responses for different layer conductivities. Figure 8 shows three examples of a thin layer at different depths. There are several common characteristics of layered earth responses. The shapes of the anomalous profiles are generally similar, becoming broader at later times. The migration of crossovers with time, with positive lobes toward the loop and negative lobes away from the loop, seems to indicate that the induced current system is migrating away from the loop. This is the type of behavior described by Nabighian (1979) as an expanding smoke ring.

If the UTEM system employed a magnetometer as receiver and a square current waveform in the transmitter, the smoke ring analogy would be exact, as the crossovers would indicate

the position of the main current concentrations. However, the UTEM receiver is a coil which is sensitive only to dH/dt, and thus to the rate of change of induced and transmitter loop current. Thus the moving pattern of crossovers is actually indicating outward migration of *changes* in the induced current pattern. Toward the end of each half-cycle, the induced current system at any point in the survey area tends to a constant value, as indicated by the electric field measurements, but this steady current is invisible to the coil receiver.

When interpreting UTEM magnetic field data, it can often be simpler to think of the data in terms of the magnetometer receiver, square-wave transmitter current (MSW) analogy. Because the analogy is *exact* for a linear process like EM induction, there is no approximation in using it. It is very convenient to think of the field measurements of secondary signal at any delay time as describing the Biot-Savart magnetic field of a changing and decaying (analogous) induced current system. However, when electric field data are being analyzed and compared with magnetic field (dH/dt) data, it is necessary to revert to the true picture of the induced currents (or take a time derivative of the E data) to maintain a consistent relationship. UTEM magnetic field data are usually symbolized as H^s_{zi} (alphabetic subscript = component direction, superscript = p primary, s secondary, T total, numeric subscript = channel number) to accord with the magnetometer analogy; and in most discussions of simple induction, it is the time history of the *analogous* induced current which is described.

An important feature of layered earth H^s_z data is the early-time limit of continuously normalized H^s_{zi}/H^p_z data. If the ground is sufficiently conductive near the surface, the early-time secondary field data at points remote from the transmitter loop will approach -200 percent; i.e., one finds that the voltage in the receiver coil has had insufficient time to change from the steady value attained at the end of the previous half-cycle (Figure 2). This situation may be pictured in the magnetometer-square wave current analogy as an induced current system forming near the surface of the ground under the transmitter loop such as prevents the total (analogous) magnetic field from entering into the ground anywhere except very close to the transmitter wire. The -200 percent anomaly thus represents response at the inductive limit.

Finite thin plate in free space

A convenient modeling method for thin finite plate conductors in free space is the integral equation solution of Annan (1974). Annan computed the best set of polynomial eigenpotentials of order 4, and used these to represent the induced current flow in the plate as a sum of 15 "eigencurrents." The solution for the eigencurrents themselves is quite complicated, but needs only to be done once for a plate of given width to length ratio. After that, any induced current system can be described in terms of 15 coefficients in the eigenpotential summation. The secondary field at a receiver can then be simply computed in terms of these induced eigencurrents. One great advantage of Annan's method is that each eigencurrent has a frequency or time-domain response identical to a simple loop circuit. Thus the solution for a broad frequency range or many time windows is very easy to calculate. Routines for simple, interactive application of Annan's algorithms to a number of EM systems have been programmed by Dyck (Dyck et al., 1980).

Examples of type curves generated with Annan's solution may be found in Lodha (1977) and Lamontagne et al. (1980). Figure 9 shows the results of a set of computed UTEM type curves for the geometry shown in Figure 10. Also shown in Figure 10 is the geometry of the primary magnetic field, which controls the nature of induction in the plate. For the zero dip case, the primary field is mostly perpendicular to the plate. The induction in the plate tends to cancel this field at early times, leading to a negative H_z anomaly directly over the plate. Positive shoulders on each side show the secondary magnetic field of the "forward (analogous) current" near the front edge of the plate nearest the loop and the "reverse current" near the rear edge. The normalization scheme used in plotting this data is to divide the total secondary field by the calculated primary field at the measuring point. It has the undesirable effect of making asymmetric a secondary anomaly that is symmetric in terms of absolute amplitude by increasing the relative amplitude away from the loop. In fact, the absolute secondary amplitude of the positive shoulder near the loop is usually larger than the one on the side away from the loop. As the dip of the plate is increased, the positive shoulder moves away, and by the time a 30-degree dip is reached the reverse crossover is off the end of the plotted line. From dips of 30 to 135 degrees, the anomaly maintains a basic shape in the form of a simple crossover. The amplitude

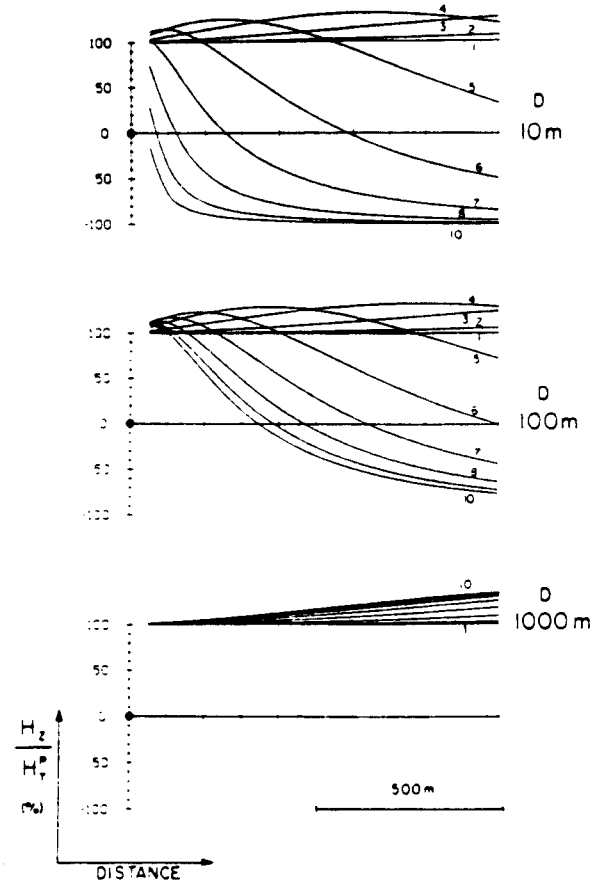

FIG. 8. Hz response of a thin horizontal sheet at various depths. The conductivity-thickness of the sheet is 2 S. The front of the transmitter loop is at the origin of coordinates.

does vary somewhat, however, being controlled by the primary field component normal to the plate which becomes a smaller and smaller fraction of the total field as the plate rotates from 30 to 150 degrees (Figure 10). The case at a dip of 150 degrees shows a very interesting behavior. The primary field can be seen to be *down* in the upper half of the plate and *up* in the lower half. The result of this is that the anomaly changes location and amplitude dramatically. For a very small plate, an anomaly could conceivably disappear completely. This phenomenon has been discussed by Bosschart (1964) for the Turam method. For a large planar conductor, however, an anomaly is always present since a curving primary field must cut it somewhere, except in the special case when a vertical conductor is located directly under the center of a horizontal transmitting loop. The 165-degree dip case of Figure 9 shows a clear reverse crossover on the edge of the conductor far from the loop. The normal crossover is very small, due in part to the reduced induction at the near edge as shown in Figure 10, and also the large primary field used as a divisor for normalization.

The electric field anomaly generated by a plate conductor in

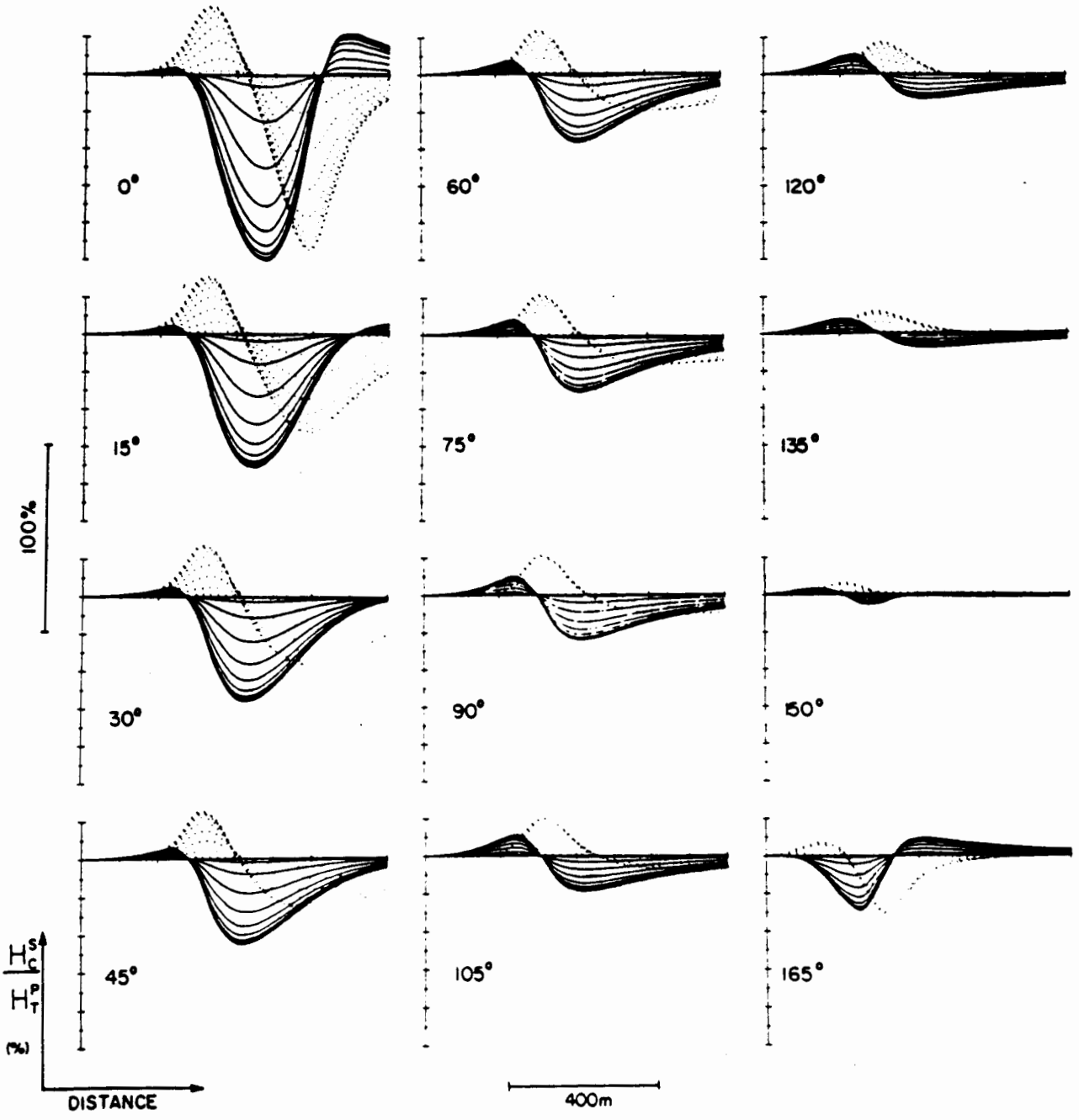

FIG. 9. UTEM H_z (solid) and H_x (dotted) profiles over a dipping plate (continuous normalization). (Geometry shown in Figure 10.)

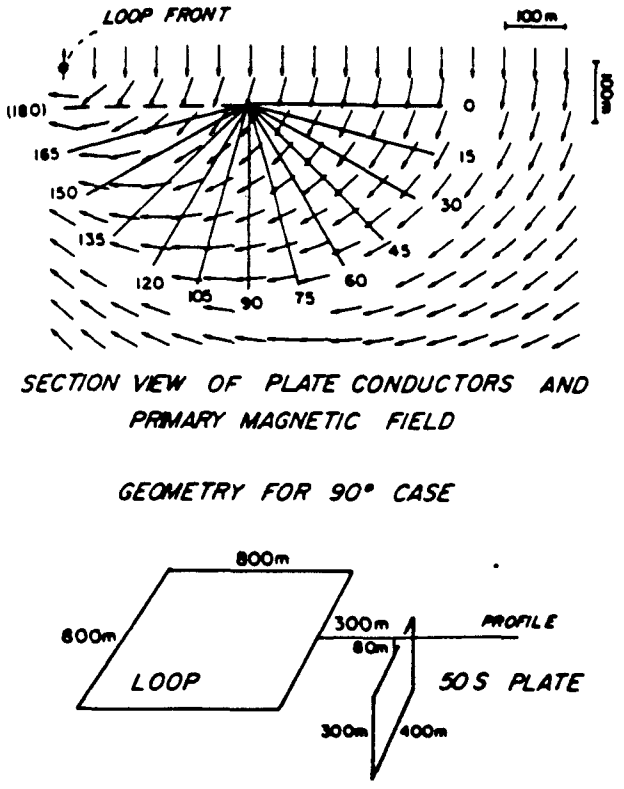

FIG. 10. Geometry and dimensions of the models shown in Figure 9. Also shown is the configuration of the primary field in the vicinity of the target conductor.

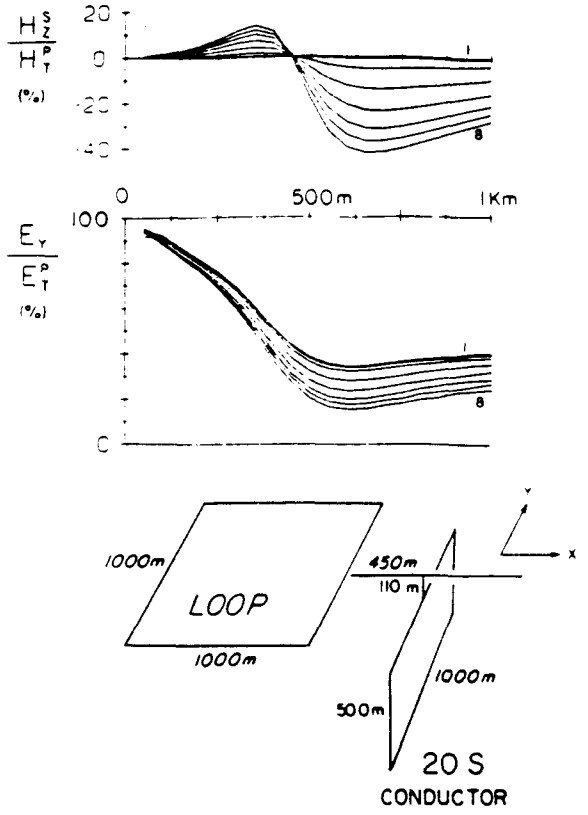

FIG. 11. Scale model UTEM secondary magnetic H_z^s and total electric E_y data over a vertical plate conductor.

a resistive half-space is caused by charge on the plate as well as eddy currents flowing in it, and is affected by the earth-air interface. Annan's algorithm does not determine the charge distribution, so analog scale modeling methods were employed to produce type profiles. Figure 11 shows an example for a vertical plate. The longitudinal electric field is greatly reduced over the body at all times (i.e., there is a strong reduction in the late time limit). The dynamic (time-varying) part of the anomaly has the same time variation as the magnetic field but has a different geometrical pattern. The electric field is highly vulnerable to distortion by any conductivity contrast and the intensity of the static, late-limit anomaly over a conductor may therefore be reduced by any stratification between the conductor and the surface.

Other simple anomaly shapes

A set of simple schematic models is shown in Figure 12, for each of which the main features of the vertical magnetic field are sketched. The set of sketches was derived from quantitative scale model experiments by Lamontagne (1975). For the simple models illustrated where the host rock is completely nonconducting, the general anomaly shape for one body remains quite constant for the whole time range. The changes in anomaly from one channel to another are mostly in the amplitude and smoothness of the anomalies.

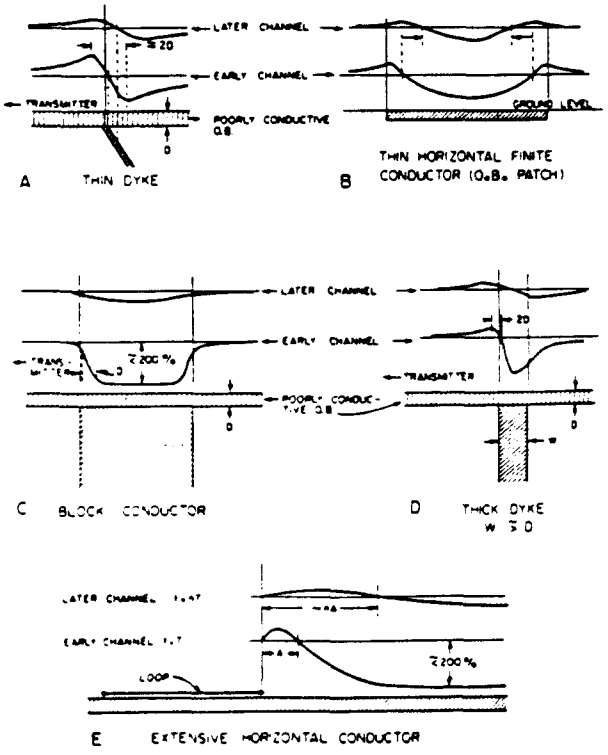

FIG. 12. The form of continuously normalized UTEM H_z^s anomalies over some simple shapes. All conductors are in free space.

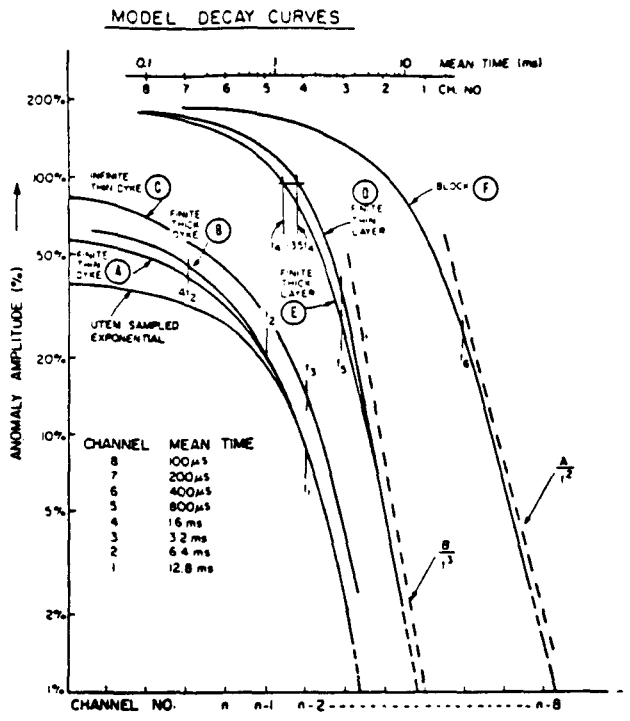

FIG. 13. The amplitude decay curves for the simple models of Figure 12. Mean sampling times are given for a base frequency of 30 Hz. The curve *UTEM sampled exponential* is a calculated function included for comparison. Lamontagne (1975) gives simple approximation formulas for interpreting target conductance from reference times $t_1, \ldots, t_6$ determined by translational curve matching.

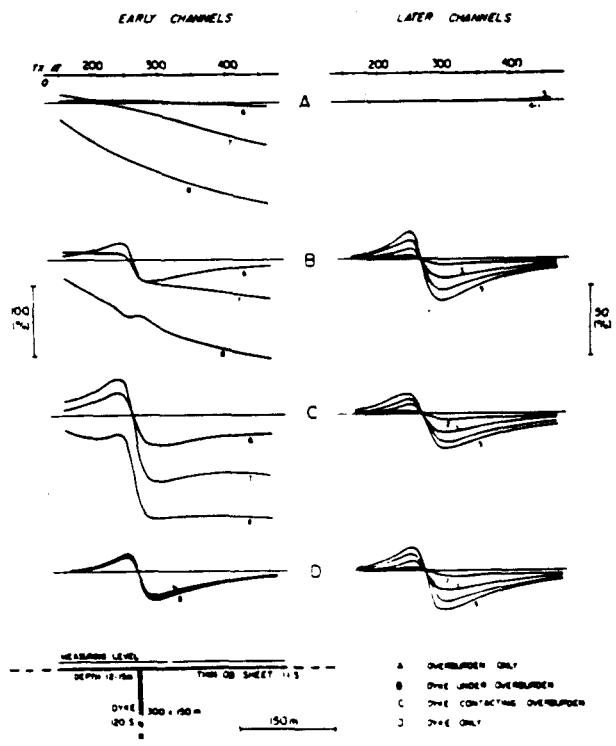

FIG. 14. Scale model UTEM H_z^s profiles over a conductive thin dike with overburden present.

Thin dike.—A conductive, steeply dipping body gives an H_z crossover shape similar to the plate model just discussed. The point where the anomaly changes sign indicates approximately the top edge of the conductor. The anomalies at later times tend to be broader and shifted slightly downdip from those at early times. The inductive decay rate of the anomalies will be discussed in a following section.

Surface horizontal finite conductor.—A thin horizontal conductor of limited dimensions (not extending under the loop) produces an anomaly consisting of a low over its central area, with large positive shoulders near its edge. The shoulders become rounded at later times and migrate towards the center of the conductor. Note that the thin horizontal plate shown in Figure 9 has a fairly deep location and thus the inward migration of the crossover points is less evident, although present.

Shallow block conductor.—This type of conductor produces a negative anomaly over its top having an amplitude of close to 200 percent at early times. An important characteristic of a block-like conductor is the absence of large positive flanking anomalies. The amplitude of the positive shoulders is less than 1/10 of the central negative, in contrast to the thin horizontal layer where the shoulders have amplitudes of order half the central negative. The sharpness of the crossovers at early time can be used as an indication of depth of burial. This type of anomaly is called a top anomaly and is due to a horizontal current pattern flowing around the top of the block.

Thick dike.—As might be expected, this is an intermediate case between a block and a thin dike where the width of a tabular body is of the same order as its depth of burial. In such cases the response is a combination of crossover and top anomaly due to vertical and horizontal current patterns, the top anomaly being more evident on the early-time channels and the crossover anomaly on later-time channels. The difference in decay rates results from the different scales of induced current flows, the top anomaly being controlled by the width of the dike, and the crossover by the depth extent.

Extensive horizontal conductors.—All the models with restricted lateral extent give rise to localized anomalies which simply change amplitude with time (approximately). The response of a very large conductor such as that shown in Figure 12e is included for comparison. In this case, the induced currents are not confined and they migrate horizontally with time.

Time response of simple free-space models.—Figure 13 shows example decay plots of log anomaly amplitude versus log time (channel number). The responses shown in Figure 13 are the UTEM sampled step responses that are only strictly valid for interpretation of actual field data when the observed anomalous response has effectively vanished at late times. Time scaling by lateral translation of the graphs is permitted for these cases, as previously discussed. The applicability of these time decays to interpretation is discussed by Lamontagne (1975), including the use of characteristic parameters to estimate conductance. A significant point to note is that simple induction in finite bodies eventually exhibits exponential decay at late time, whereas induction in infinite features takes the form of an inverse power law (Kaufman, 1978). Therefore, for models D, E, and F, the very late portion of the decay should ultimately show an exponential behavior if measured with sufficient sensitivity.

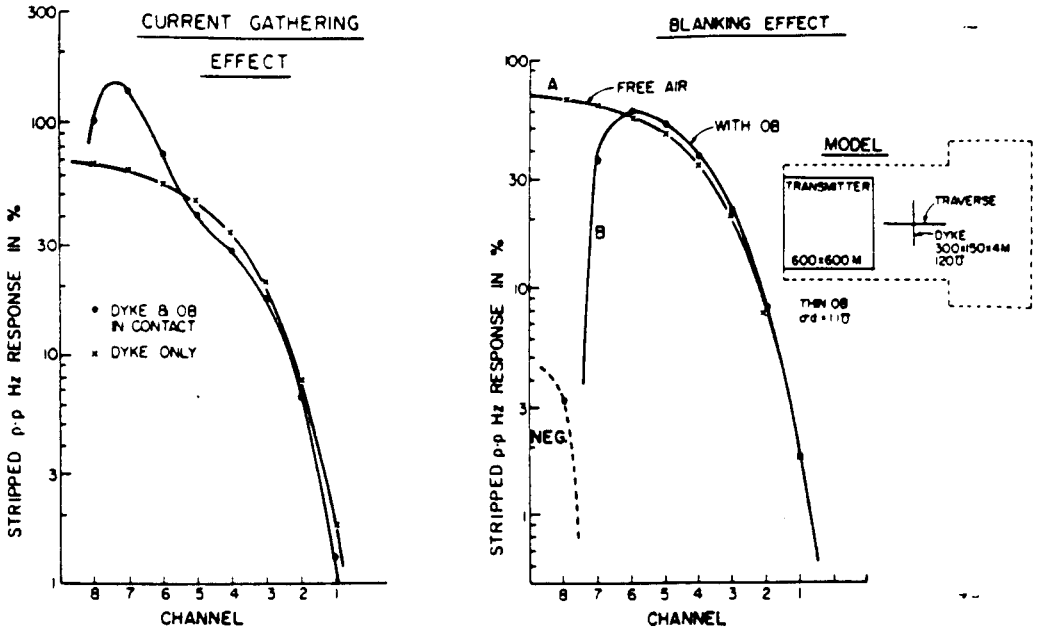

FIG. 15. Decay plots for the H_z^z anomalies of Figure 14.

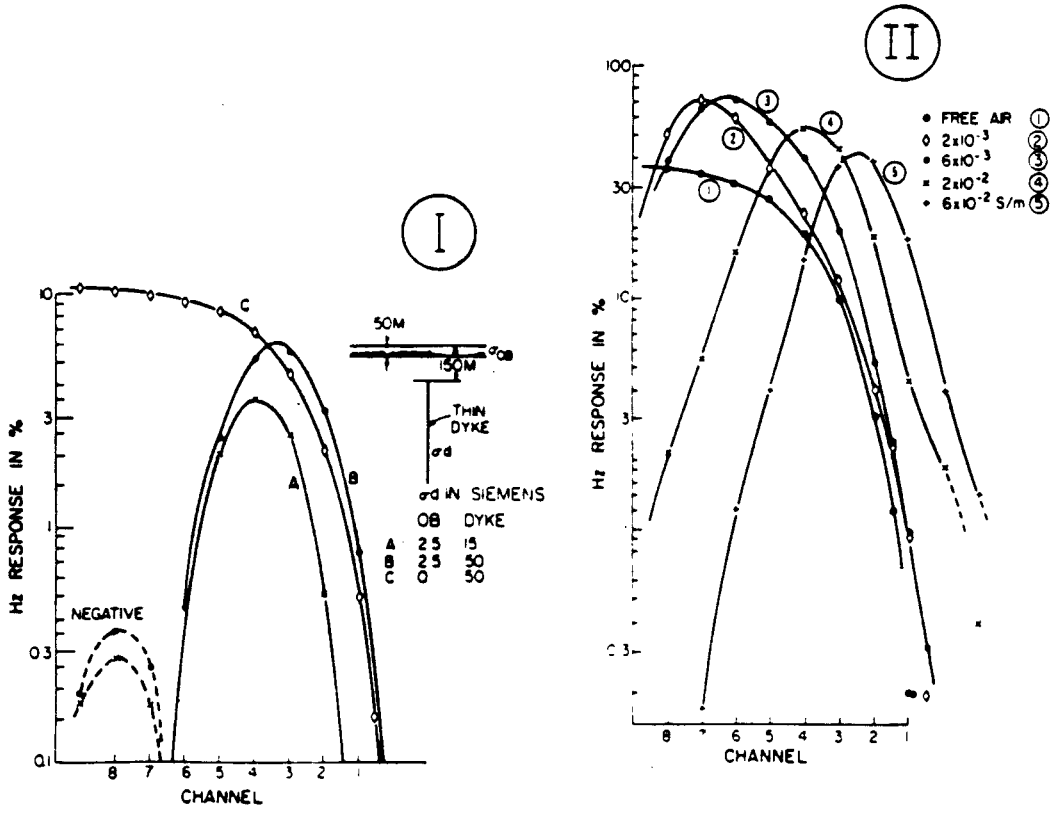

FIG. 16. Decay plots of H_z^z anomalies over a thin dike (I) under a conductive overburden and (II) in a conductive half-space.

Overburden effects

We will restrict the discussion of overburden and host-rock effects to the case of a simple vertical finite dike conductive target, which was studied by Lamontagne (1975) using a scale model. Conductive overburden cover can modify the responses of underlying conductors in two main ways. Let us consider a dike target whose response in free space is given in Figure 14d. If overburden is now placed over this target conductor, the resultant response (Figure 14b) is not just the sum of the overburden and dike response. At early times it can be seen that there is very little response from the dike. This is because the magnetic field (MSW analogy) has not yet penetrated the overburden, and it leads to the name "overburden blanking" for this characteristic. At later times (Ch 6-1), when we can see from Figure 14a that the field has completely penetrated the overburden layer, the dike and overburden response (14b) is virtually indistinguishable from that of the dike alone (14d). The time decay pattern of the peak-to-peak amplitude of the crossover is plotted in Figure 15. It clearly shows the blanking effect of the overburden at early times (right-hand figure). The minute negative response at earliest time is present only when the overburden extends under the loop, and appears to result from the complicated way in which the field first reaches the hidden target.

A second effect occurs when the dike is in conductive contact with the overburden. The results are quite different from those where the dike was not in contact (Figure 14c). In this case, regionally induced (analogous) current flow in the overburden has been "gathered" or "channeled" into the dike which is of higher conductivity. This accounts for the large-amplitude crossover anomalies at early times. Because the conductance of the dike greatly exceeds that of the overburden, the amount of current gathering is virtually independent of the dike's depth extent. The gathering effect at early times of just a "line conductor" remaining attached to the overburden after most of the dike was removed was found to be over 80 percent of that of the complete dike. At later times, when the (analogous) current flow in the overburden has migrated away (i.e., the real overburden current is no longer time-varying), the response is again almost identical to that of the dike alone. The time decay of the response is plotted on Figure 15, and in addition to the enhancement at early times a slight attenuation of the response at intermediate times can be seen.

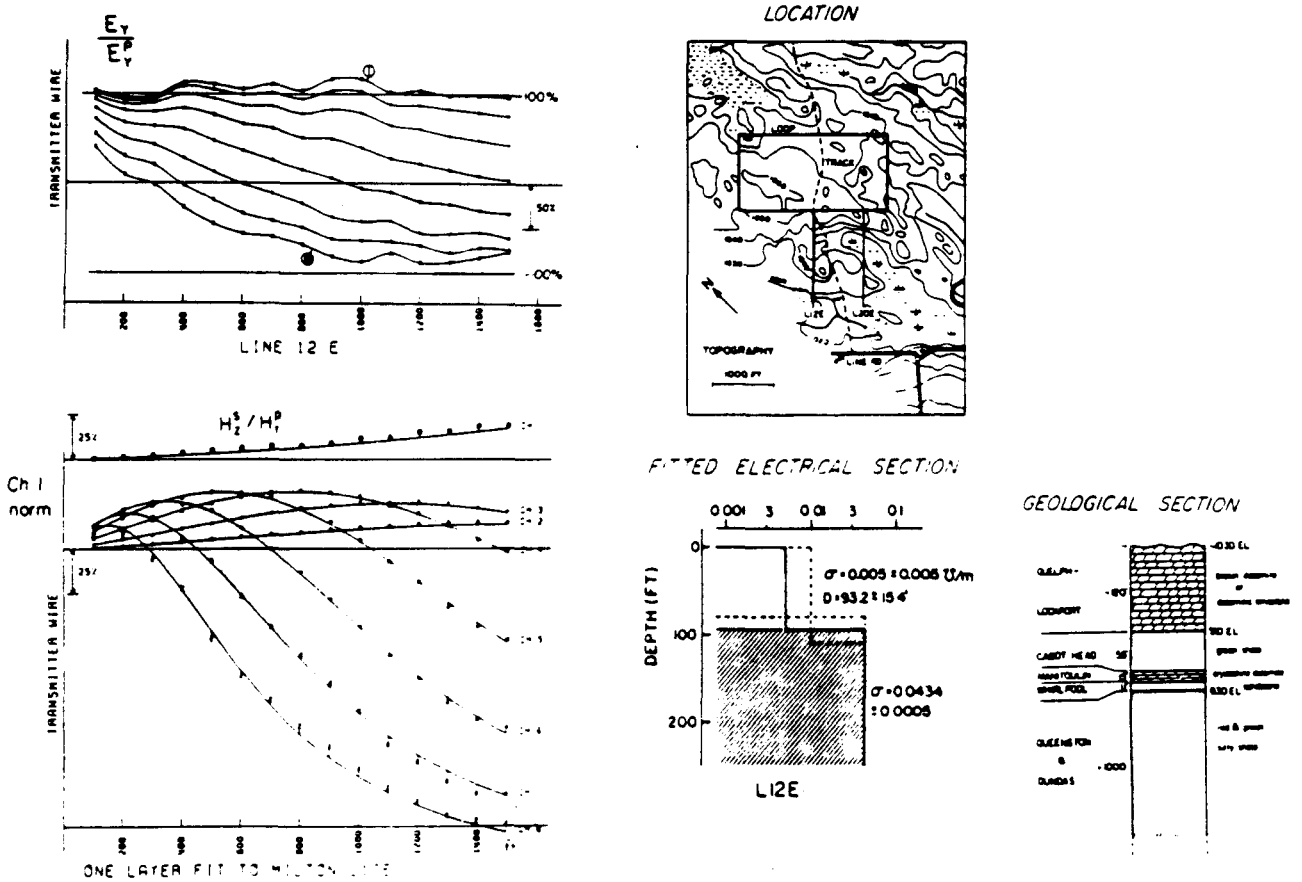

FIG. 17. Field example of E_y and H_z^s data from a well-stratified earth. The electrical section was obtained from inversion of the H_z^s data. The curves on the H_z^s graph are the theoretical model; the points are the field data. The bottom axis is at −150 percent. The geologic section is from nearby gas drilling exploration.

Host rock effects

Figure 16 II shows the time variation in response of a 60 S vertical plate located in a half-space. The results were calculated by Lamontagne (1975) by Fourier transformation of the frequency-domain numerical modeling of Lajoie and West (1976). At early times the response is reduced from the free-air response: this corresponds to blanking by the conductive region above the target. At later times the response is enhanced indicating that the regional (analogous) current in the host rock is being gathered into the plate at these times. For poorly conducting host rock, the response at late times is close enough to the free-space response that simple interpretation of the target using a plate in free-space model is valid. For the higher host conductivities (case 4, 5) this is no longer the case.

FIELD RESULTS

Milton, Ontario

This area was surveyed to demonstrate what data from a conductive, well-stratified earth looks like. The area is one where 650 m of flat-lying Paleozoic sediments overlie the Precambrian basement. The predominant member of the stratigraphy is a uniform and thick sequence of shale. Other beds are mostly resistive calcareous and sandstone formations. The survey area is covered by a mixed forest and marshy streams, with occasional outcrops. The top of the bedrock is a dolomite formation which is everywhere more than 20 m thick. Topographic relief is minor (< 10 m), with occasional rough spots near outcrop. Overburden is probably less than 10 m every-

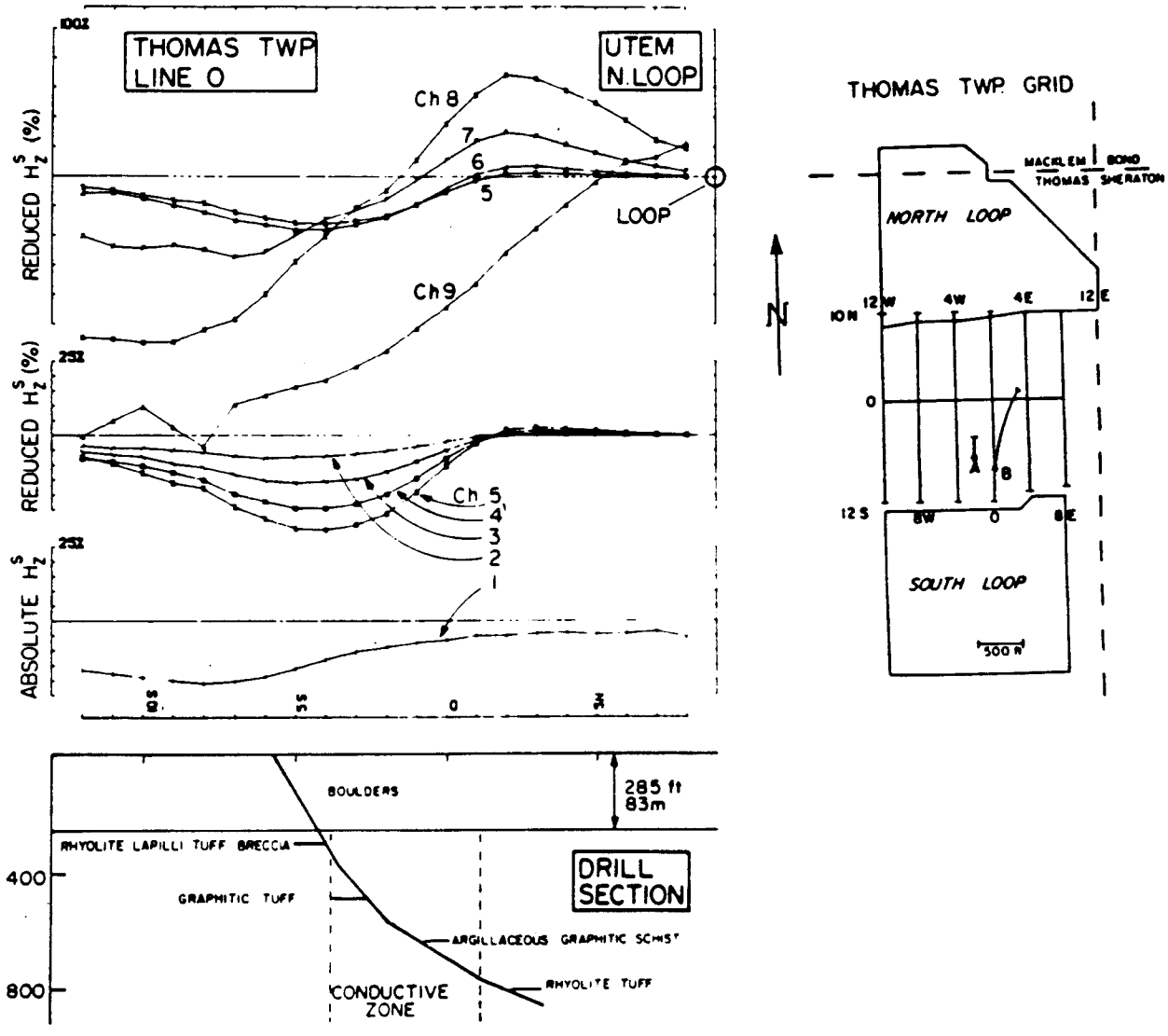

FIG. 18. A profile of H_z^s data from the north transmitter loop across the Thomas Twp test site. A map of the survey is included (different scale).

where and much less on average. It is mostly humus or thin glacial soil. Surface water is fresh, and likely quite resistive (> 100 Ωm). Figure 17 shows some of the data with a layer and half-space model fitted to it by iterative minimization of squared error. Also shown is a stratigraphic section from a well a few kilometers distant. The dolomite layer is too resistive for its conductivity to be determined by data whose earliest time sample is at 100 μs. (The survey was done with UTEM I.) At first glance, the data look just like that for any conductive earth, as the early-time data at the end of profiles have the usual strong negative anomaly, and there is a regular outward progression of crossovers as time progresses (decreasing channel number). However, the resistive surface layer does reveal itself in the limited approach of the early time curves to −200 percent anomaly. The convergence of E_y at late time to 100 percent of the primary field confirms the excellent lateral homogeneity of the site.

Thomas Township, Northern Ontario

This site has become an interesting test range for electrical methods, and a new grid has been cut and named the Nighthawk Lake geophysical test range. It is a graphitic zone that has many of the geometrical and electrical characteristics of a massive sulfide body. It is covered by 83 m of only moderately conductive overburden. It was found originally by airborne EM and has been intersected by two boreholes.

A UTEM II survey with 30 Hz base frequency was carried out on 6 lines of length 2200 ft and spacing 400 ft using transmitter loops to the north and south of the grid. Figure 18 shows a profile across the middle of the conductive zone.

At 50 μs (Ch 9), the regionally induced (analogous) current is only 500 ft from the loop. The field has not penetrated the overburden at the target site. From 100 μs to about 500 μs (Ch 8-6), a crossover response is observed over the target. At about

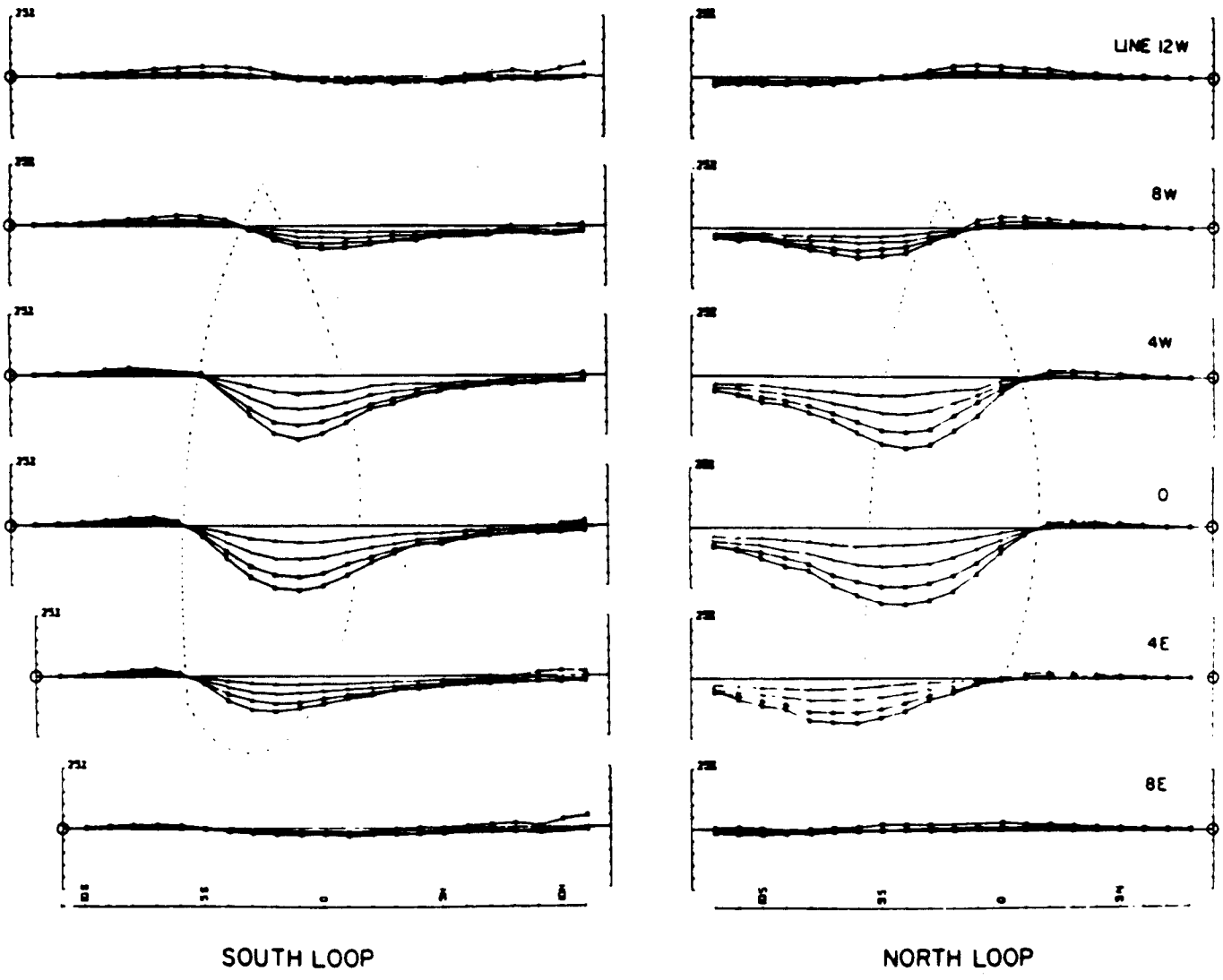

FIG. 19. Later time H_z^1 profiles (Ch 5-2) outline the perimeter of the conductor.

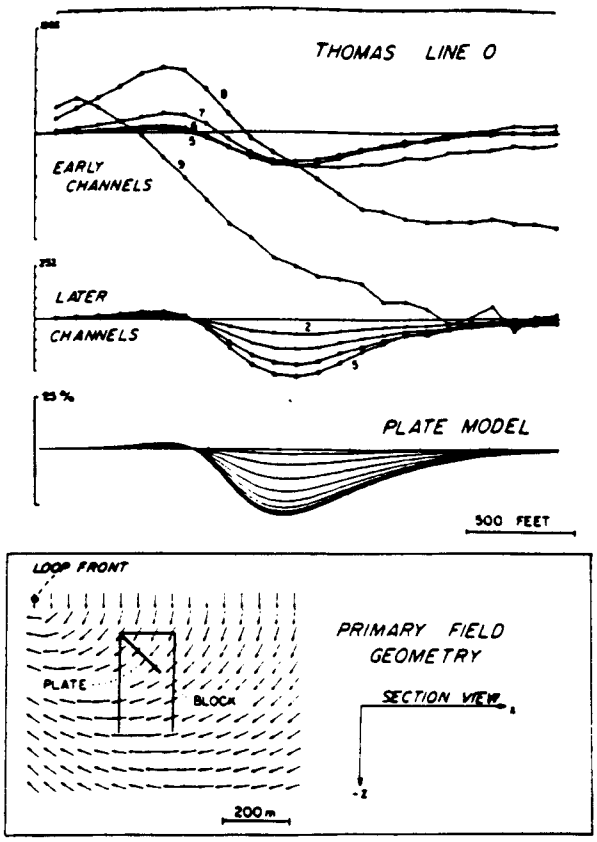

FIG. 20. Comparison of H_z^s data from the south transmitter loop with a free-space plate model. The configuration of the primary field is also shown.

500 μs the response changes to an asymmetric negative anomaly which decays much more slowly than the crossover response. The early-time crossover response is a current gathering or channeling anomaly where the (analogous) anomalous current flows along the length of the zone, while the longer time constant response is a local induction anomaly, where induced currents flow in a vortex within the target conductor.

Figure 19 shows a map of all the late-time profiles. They clearly delineate the edge of the target body. Figure 20 shows how a rectangular plate model can be found which models the observed results from one transmitter loop quite accurately, but which has to be rotated in order to match the results from the other loop. The late-time induced (analogous) current system in the actual conductor appears to be a tightly defined normal current in the front upper (near-loop) edge of the conductor with a more diffuse, return current deep in the rear of the body. A survey with the transmitter loop located on the other side of the body was similarly fitted by a plate dipping away from that loop, indicating the conductor to be a thick zone in which currents can flow in a variety of directions.

Electric fields were measured at the Thomas site. The late time vector map is shown in Figure 21, along with a rough numerical model. The conductive zone shows very clearly, although its edge is ill defined. Figure 22 shows a profile of the longitudinal component of electric field over the body. The field intensity is almost constant from channel 6 onward, and the main feature of the response is the aforementioned broad reduction in the field strength over the conductor. It is helpful, when looking at E field profiles, to imagine a plot on the same axes of the negative of the observed channel 1 response. This is the value the field starts from at the half-cycle transition. Even as early as 50 μs (Ch 9), the electric field has made most of its polarity reversal. In fact, between the loop to the target body it has overshot, while from the target body outwards it is changing relatively slowly. The time changes in E are actually very similar to those in H. There are two dominant decay times, a short one corresponding to the overburden and the channeling target response (Ch 8-6) and a long one corresponding to the local induction response (Ch 5-1). Also, these two E-field responses have a different geometrical form corresponding with the different forms of the magnetic anomalies. The scaled up version of the E data in Figure 22 shows the slowly decaying anomaly. Considerable noise is apparent in the data at this magnification.

Bedrock conductor beneath overburden

Figure 23 shows the measured secondary H_z fields at a site in Australia. The slow outward migration of the early-time channels and the −200 percent early-time limit away from the transmitter loop are characteristics of the response of a near-surface conductive weathered layer. This layer has a total conductance of about 4 S.

Around station 210W a more local superimposed crossover anomaly is evident which is fixed in location. This feature is evident over a great strike length. When the visually estimated overburden response is stripped from the anomaly and the peak-to-peak crossover response is plotted on a decay plot (Figure 26), the characteristics of early time blanking, time delay, and enhancement are clearly displayed. Corresponding to the model data of Figure 16, the early time blanking attenuates the local anomaly as the (analogous) magnetic field has not had time to penetrate the weathered layer. At intermediate times (Ch 5, 4) the response lies above a fitted free-space, half-plane conductor decay curve. This is partly an amplitude enhancement from current gathering and partly due to a small delay in time while the (analogous) magnetic field penetrates the near-surface conductor. It is not clear whether any of the L400S response can be identified as due to local induction. Nevertheless, the plotted induction curve for a half-plane in free space serves as a useful reference and establishes an upper limit on the conductance of the feature (7S in this case).

On two survey lines about 1 km away, the same local feature is observed, but the response has changed to one of longer time constant. As shown in Figure 24, a clear response persists through channels 2 and 1. These data are replotted with "point normalization" on Figure 25 to show the absolute secondary field. Absolute normalization preserves the true anomaly shape, but has the disadvantage of scaling up strongly those anomalies which lie near the transmitter. The stripped peak-to-peak response is plotted in decay form in Figure 26 and clearly shows the difference in time constant at the two locations.

The increase in time constant seen on line 600N is very significant, since little change is seen in the background response and only a lesser change in the blanking time. It indicates that the L600N late-time response is due to local induc-

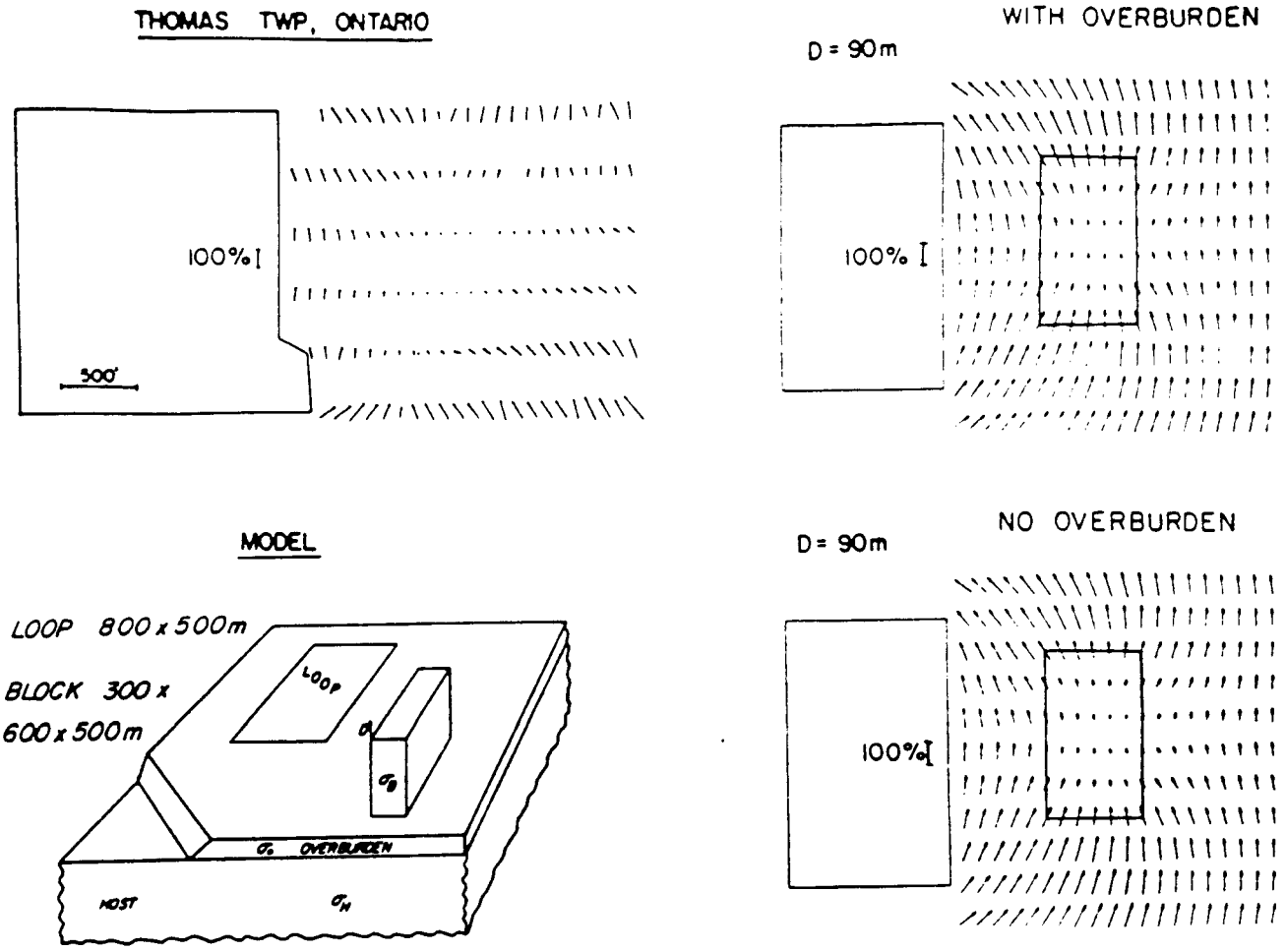

FIG. 21. Vector map of the late-time E field at Thomas Twp. A block model is included for comparison. The example is for a case where $\sigma_B \gg \sigma_O \gg \sigma_H \gg \sigma_{AIR}$.

tion. Model fitting of the decay, taking into account the limited strike extent of the long time constant response, leads to an interpretation of this feature as a local thickening of the half-plane conductor. The local conductance needed to produce the longer time constant is 120 S in contrast to the 7 S maximum of the rest of the bedrock conductor.

Drilling indicated that the extensive conductor was a 50 m thick calc-silicate zone containing both carbonates and sulfide lenses within a talc-sericite host. The locally more conductive part consisted chiefly of nearly massive noneconomic sulfides.

CONCLUSIONS

Experience with UTEM demonstrates that a wideband, time-domain EM system which measures the step response of the ground is electronically feasible and practical. Considerable field and modeling experience has shown that it is simple to use the amplitude information from such a system to aid significantly in interpretation. In our opinion the step response has a significant advantage over the impulse response for detection and interpretation of good conductors in the presence of poorer ones. Electric field data measured with the system can provide independent information about lateral conductivity contrasts and may be a useful aid in interpretation.

ACKNOWLEDGMENTS

Development of the UTEM system and its interpretational capability was funded from a number of sources. UTEM I was developed with support from the National Research Council of Canada. UTEM II instrumentation was supported by UMEX Ltd., Texasgulf Inc., and Cominco Ltd., with interpretational studies funded by a consortium of companies consisting of Aquitaine, Asarco, Cominco, Geoterrex, Gulf Minerals, Inco, Newmont, Noranda, Phelps Dodge, Selco, Shell Canada Resources, Texasgulf, and Umex. Graduate students, Y. Lamontagne, G. Lodha, J. Macnae, and M. Vallée, who worked on the project received stipendary and computing support from the

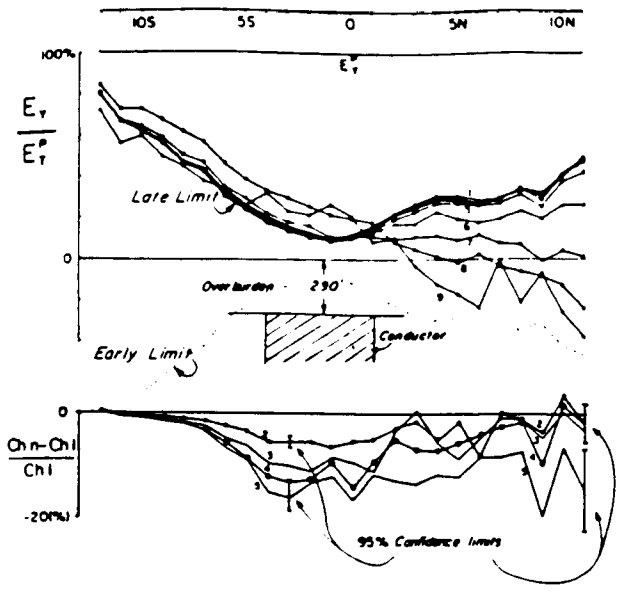

FIG. 22. Thomas Twp E_z data for line 0 from the south transmitter loop. The expanded scale data on the lower axes show that a very weak dynamic E field anomaly is associated with the main H_z^1 late time response (Ch 5-1).

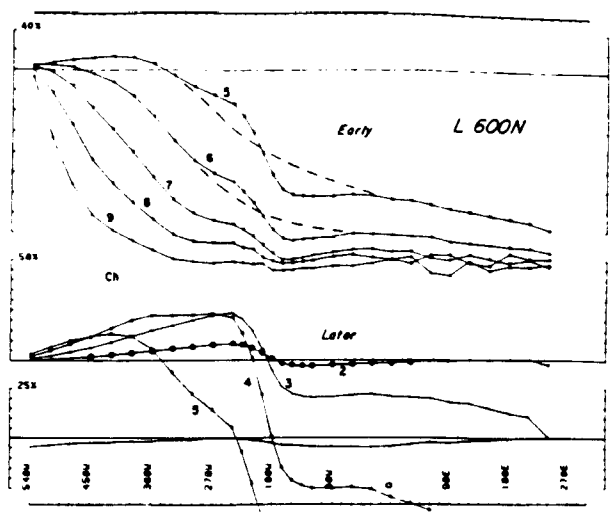

FIG. 24. H_z^1 data on line 600N 1 km away from the previous figure showing a time decay of the local anomaly lasting to much later times. Remeasurement of the profile at 13 Hz gave virtually identical profiles (shifted one channel) with no visible Ch 1 anomaly.

Natural Sciences and Engineering Research Council of Canada and the University of Toronto. All this assistance is gratefully acknowledged. We also thank an anonymous reviewer for a very careful, helpful review.

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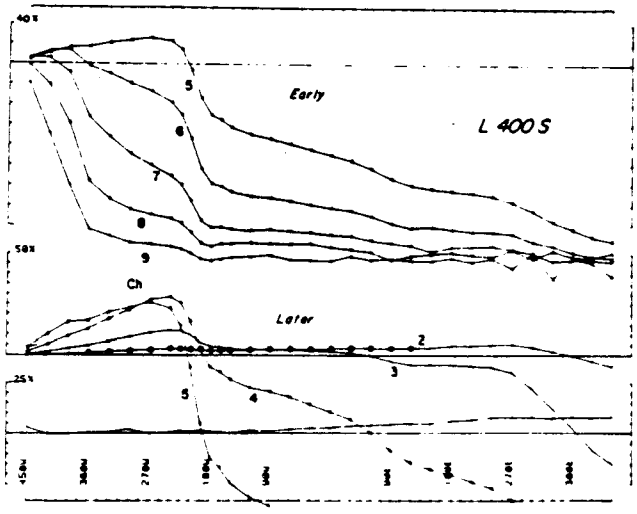

FIG. 23. H_z^1 data from New South Wales showing the migrating crossovers of the overburden near the loop and a local anomaly around station 210 W. (Survey frequency 26 Hz.)

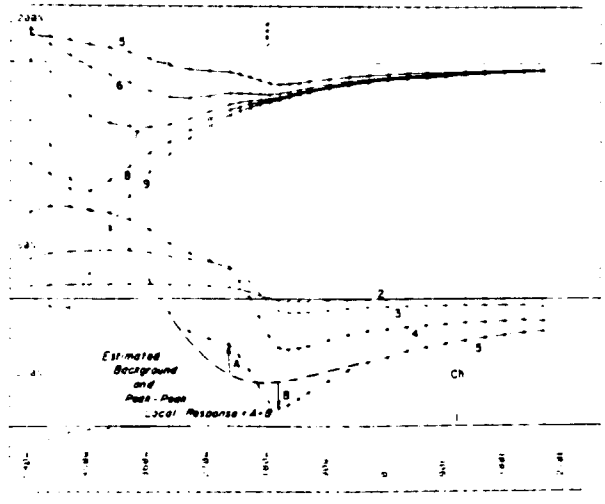

FIG. 25. Point normalized H_z^1 from line 600N. The local secondary fields have been normalized to the constant primary field at station 210W and show how stripped peak-to-peak local anomaly amplitude is estimated.

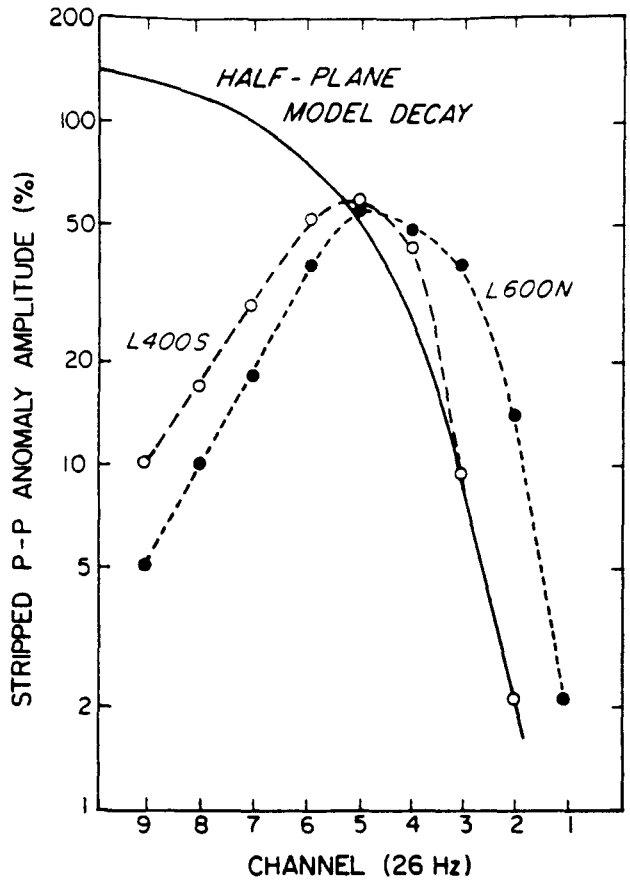

FIG. 26. Amplitude decay plot of stripped anomaly on lines 400S and 600N of the New South Wales survey.

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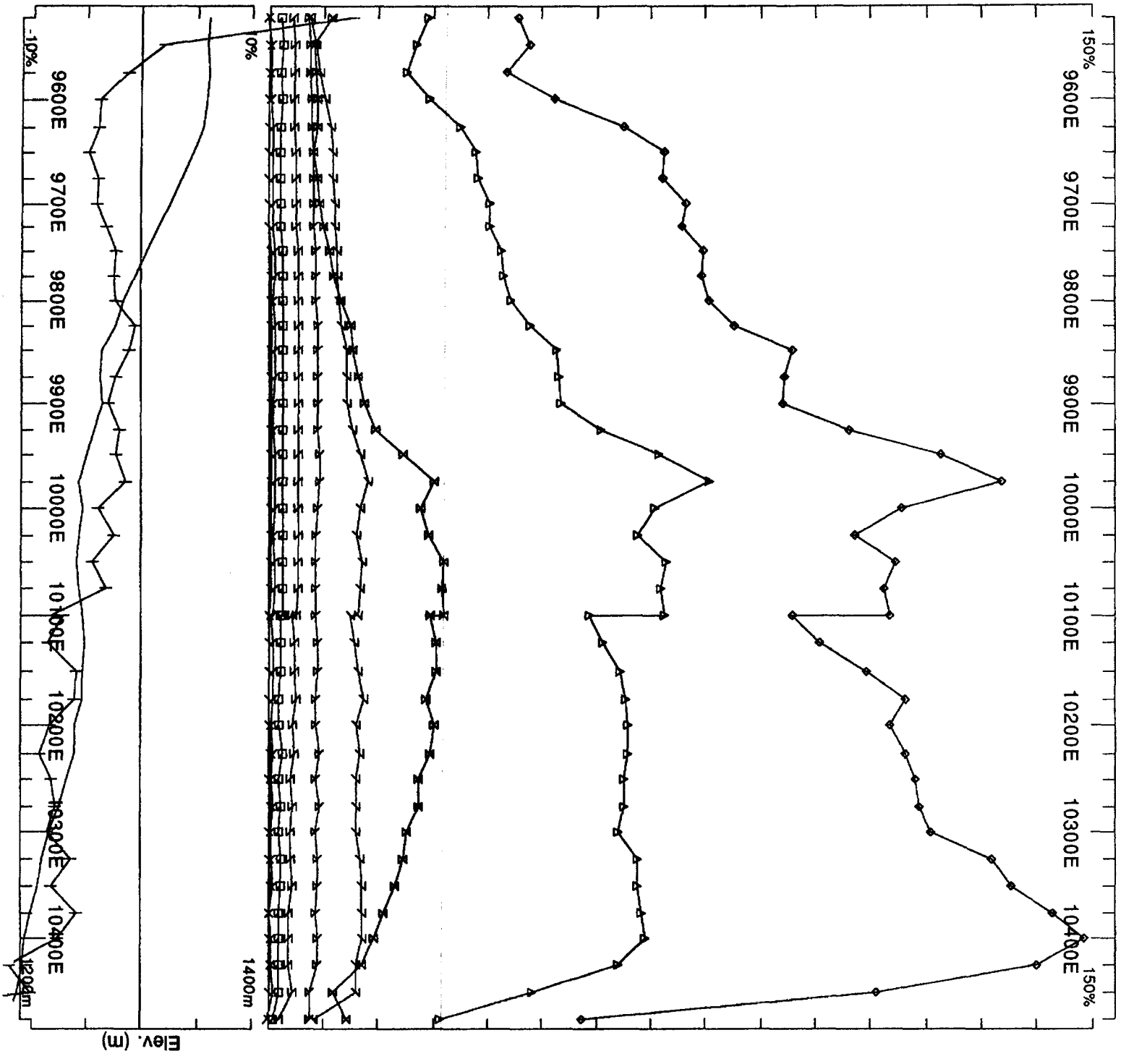
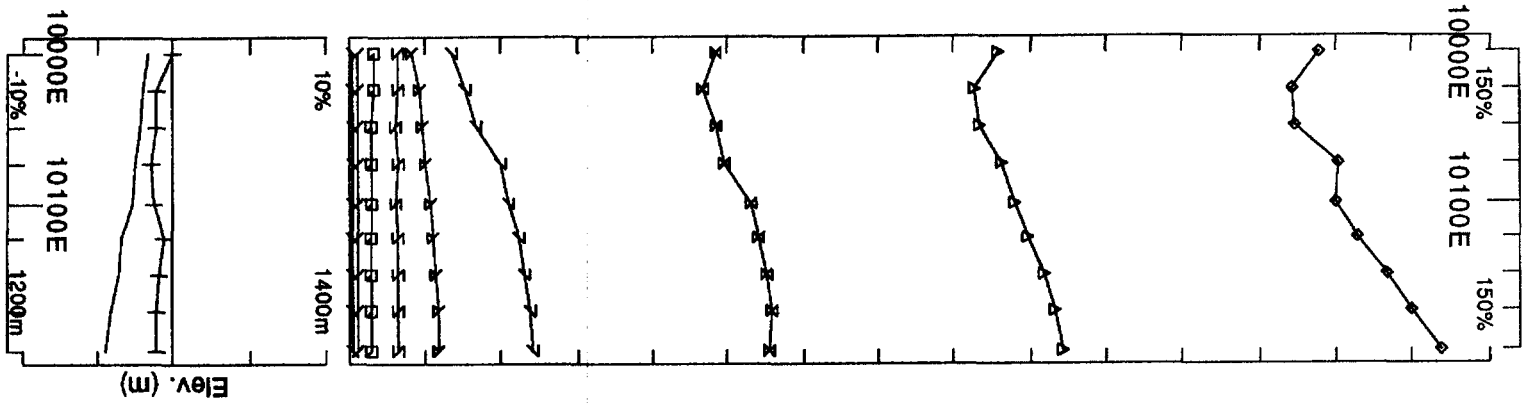
APPENDIX IV

Data Sections

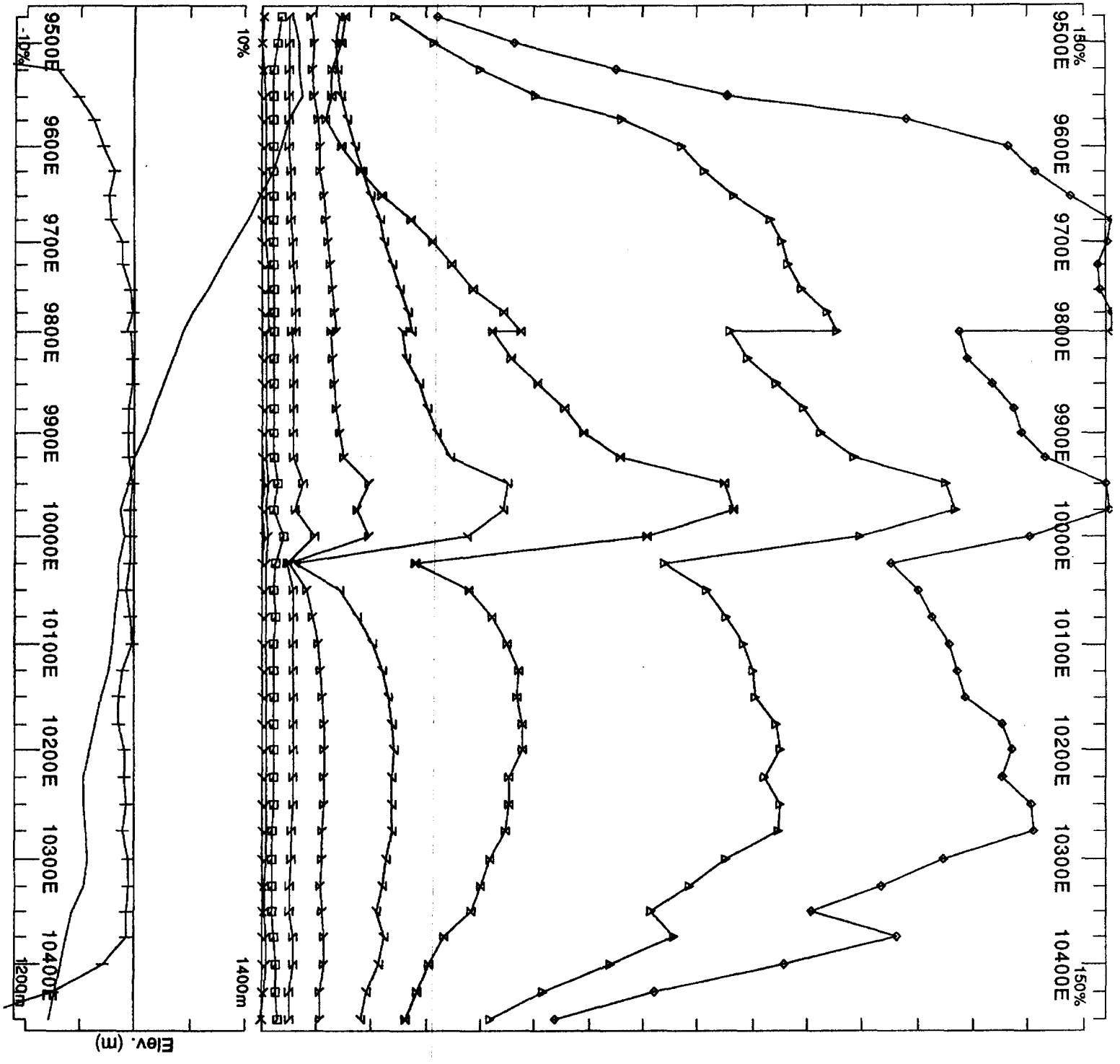
SJ Geophysics Ltd./S.J.V. Consultants Ltd. 11762 - 94th Ave., Delta, B.C. Canada
tel (604) 582-1100 fax (604) 589-7466 E-mail sydv@sjgeop.bc.ca



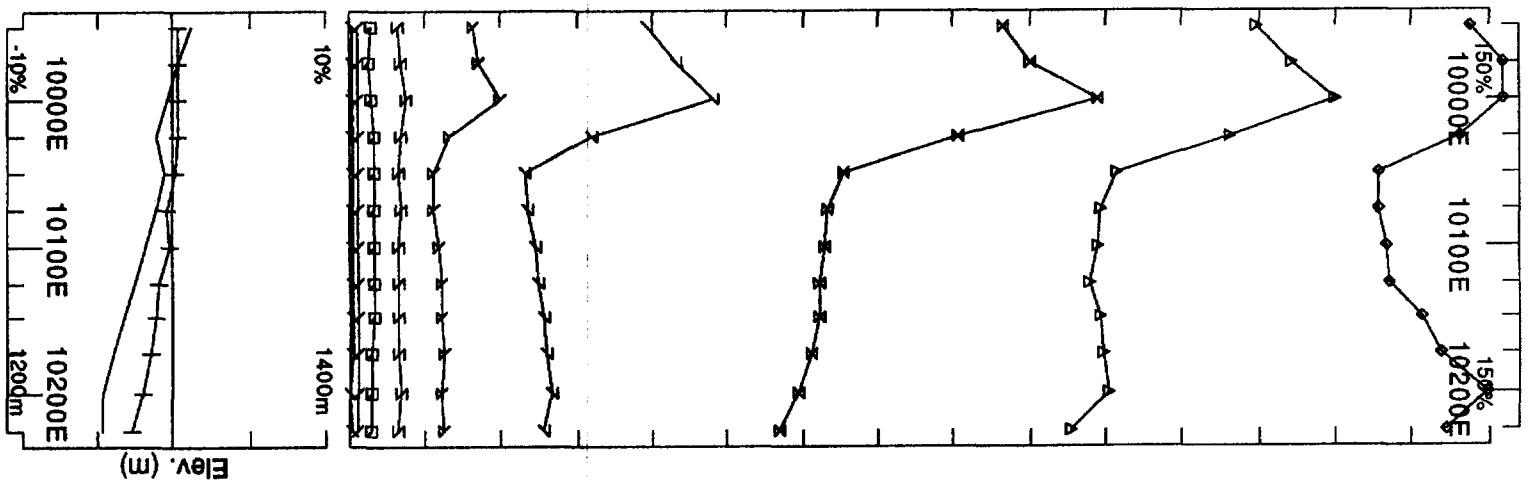
Loop: 1 Line: 10900N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 1/12/97



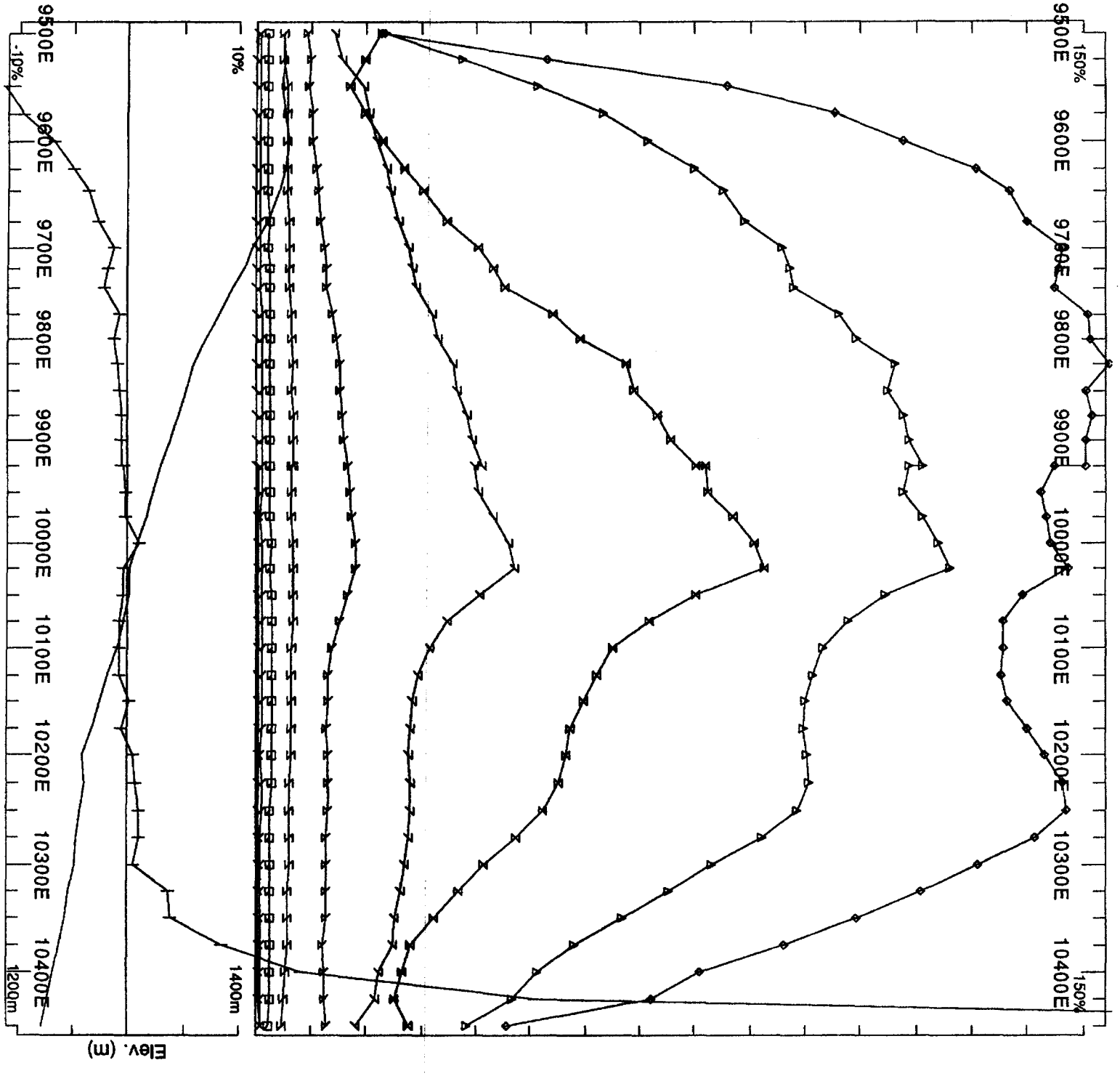
Loop: 1 Line: 11150N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Surveyed : 24/7/9 Reduced : 28/7/9 Plotted : 1/12/97



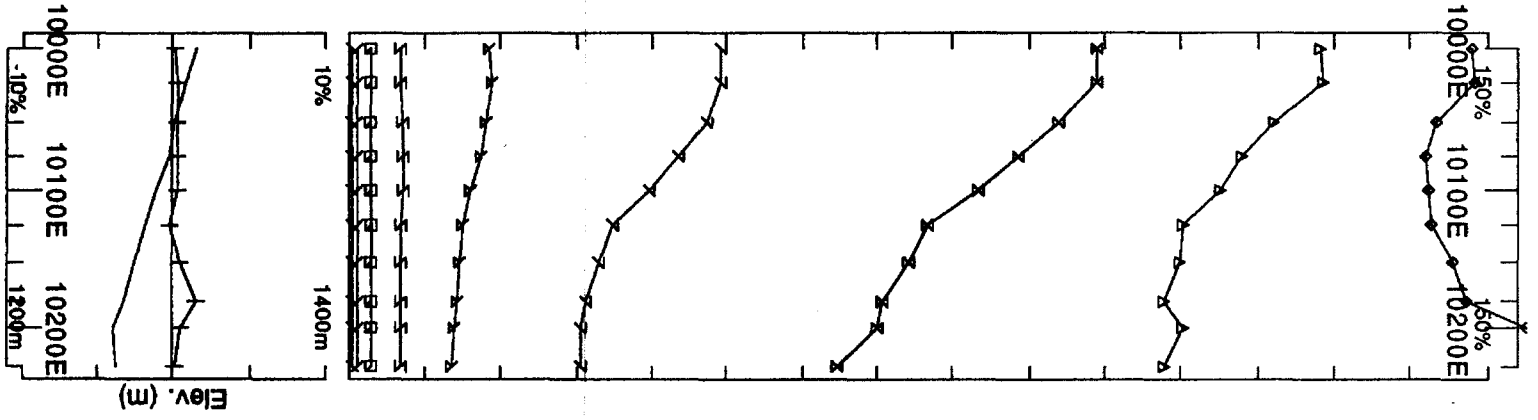
Loop: 1 Line: 11200N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Plotted : 30/11/97



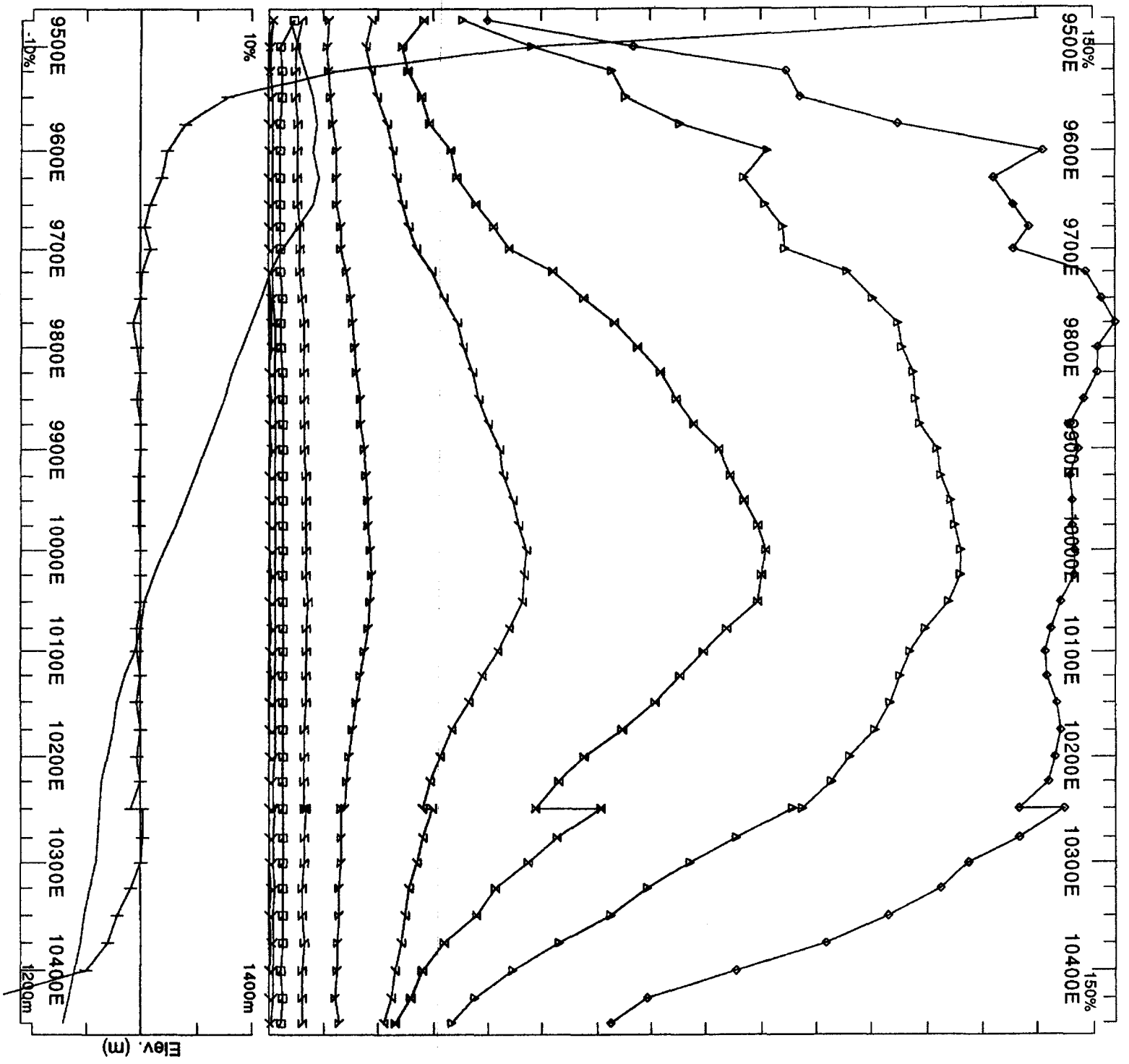
Loop: 1 Line: 11250N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Surveyed : 24/7/9 Reduced : 28/7/9 Plotted : 1/12/97



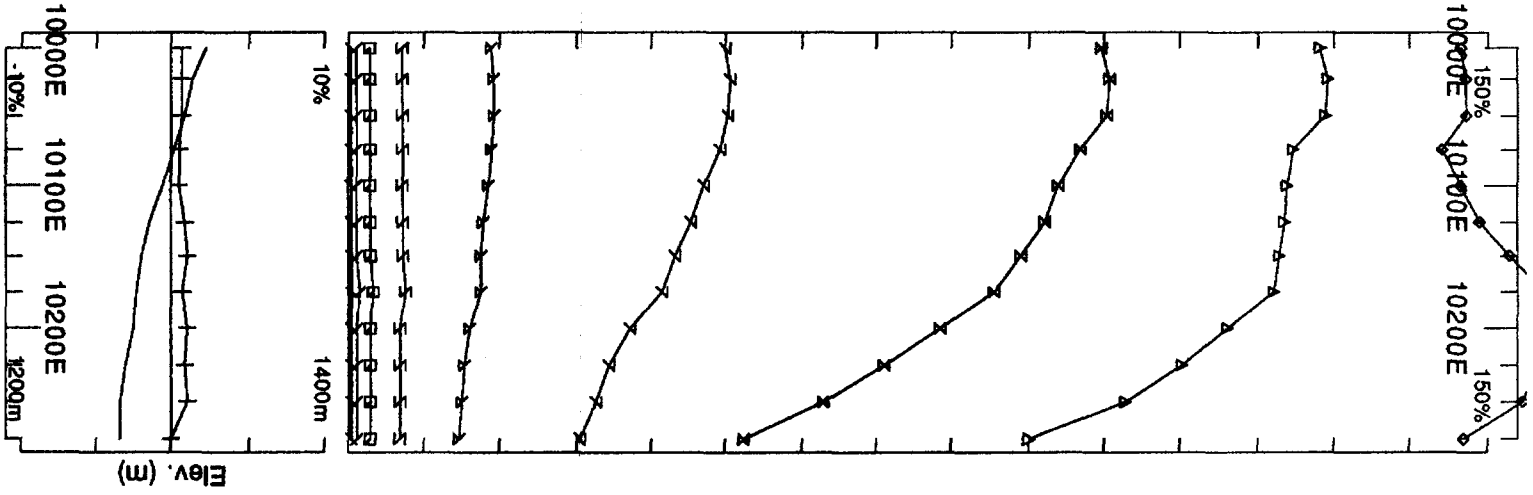
Loop: 1 Line: 11300N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Plotted : 30/11/97



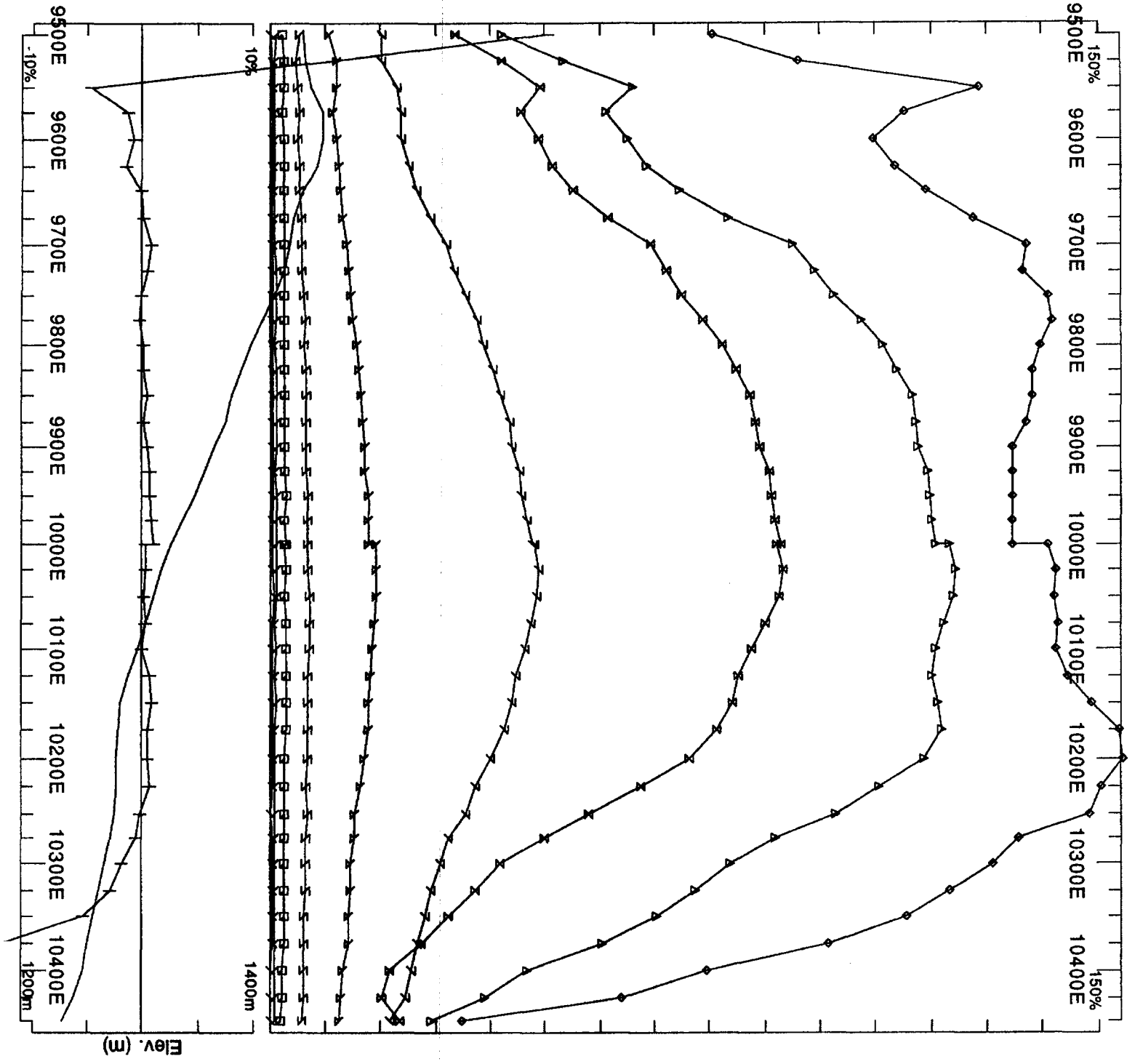
Loop: 1 Line: 11350N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 24/7/9 Reduced : 28/7/9 Plotted : 1/12/97



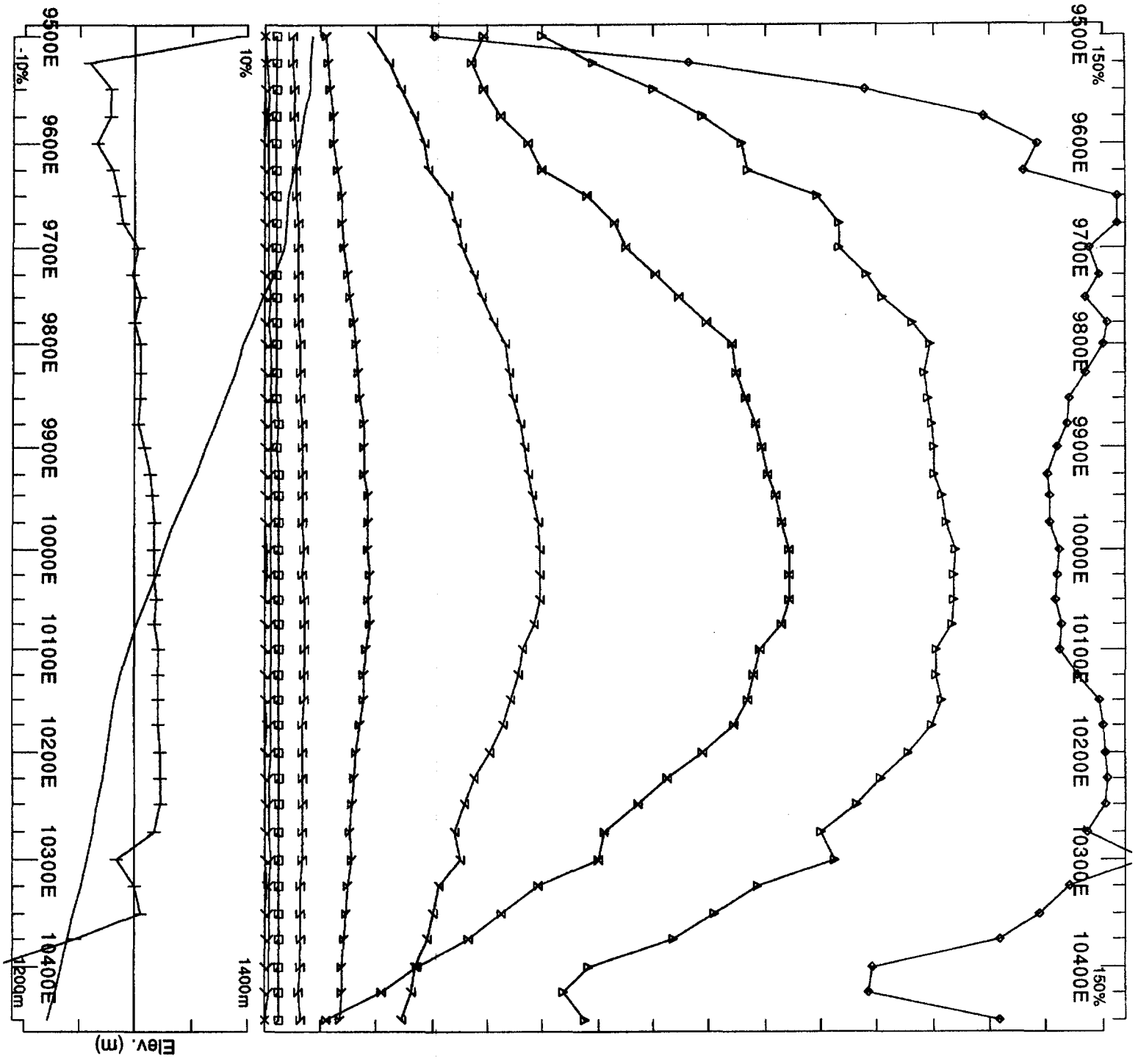
Loop: 1 Line: 11400N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 30/11/97



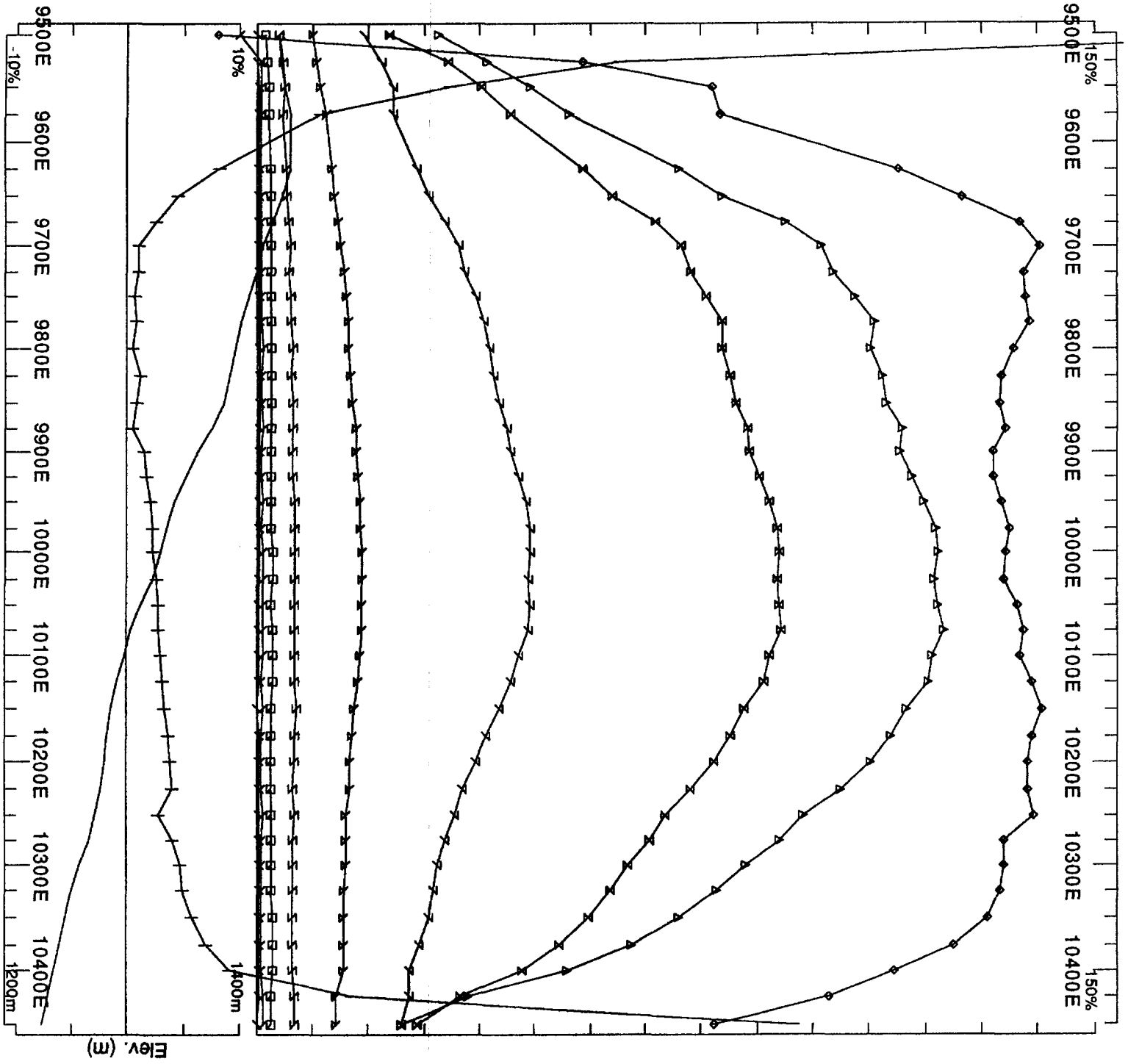
Loop: 1 Line: 11450N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 24/7/9 Reduced : 28/7/9 Plotted : 1/12/97



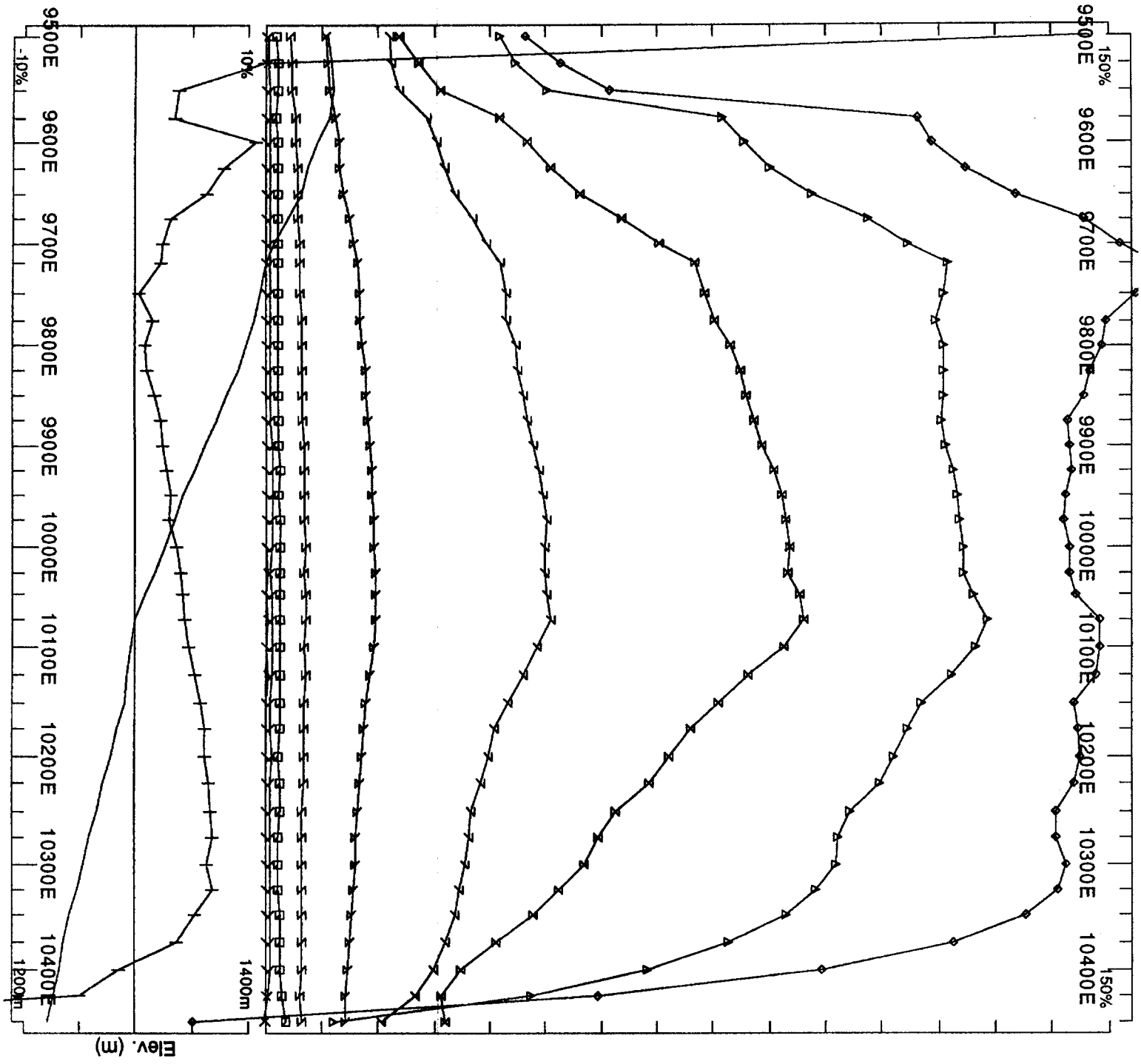
Loop: 1 Line: 11500N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 30/11/97



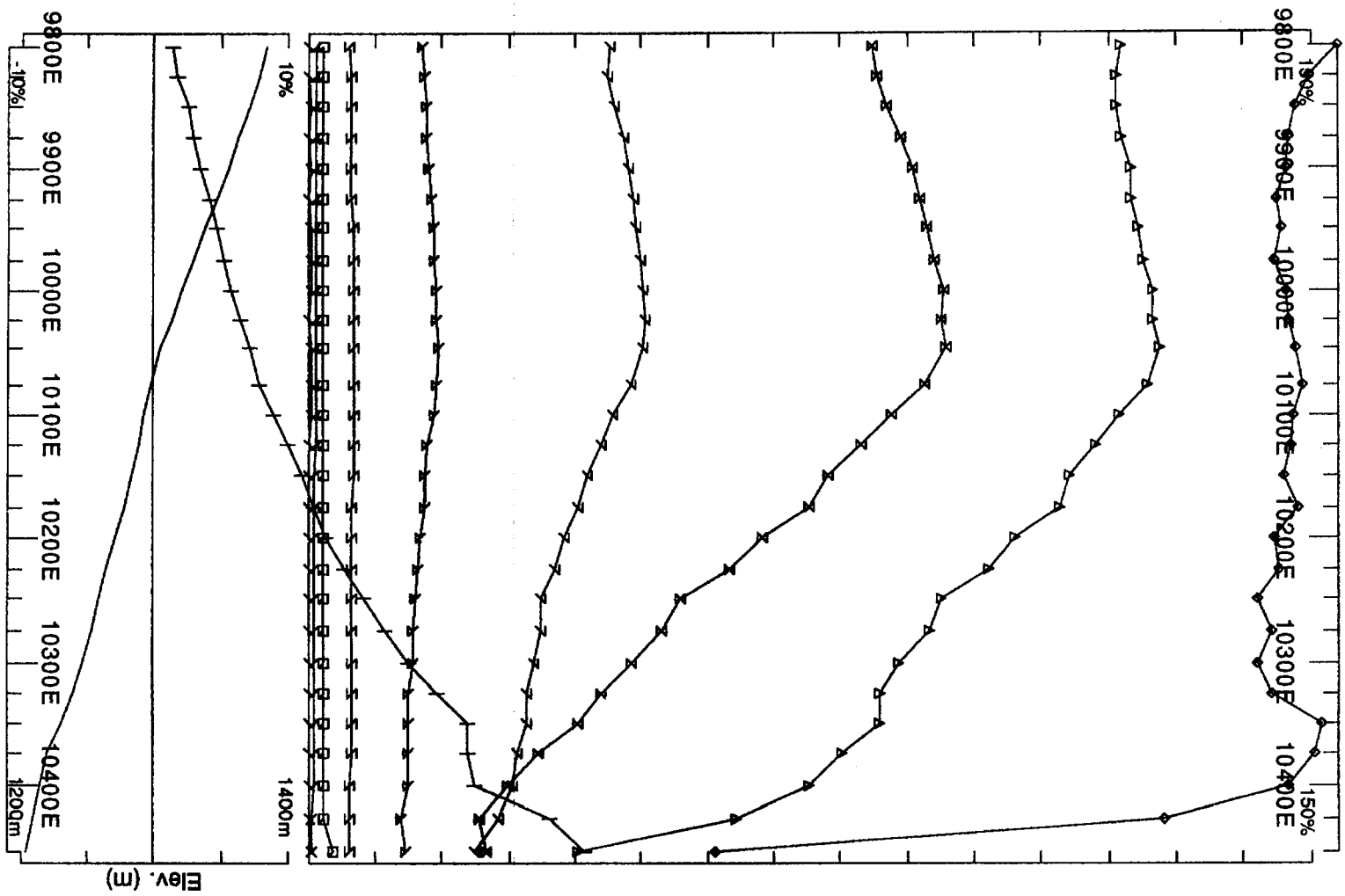
Loop: 1 Line: 11600N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 24/7/9 Reduced : 28/7/9 Plotted : 30/11/9



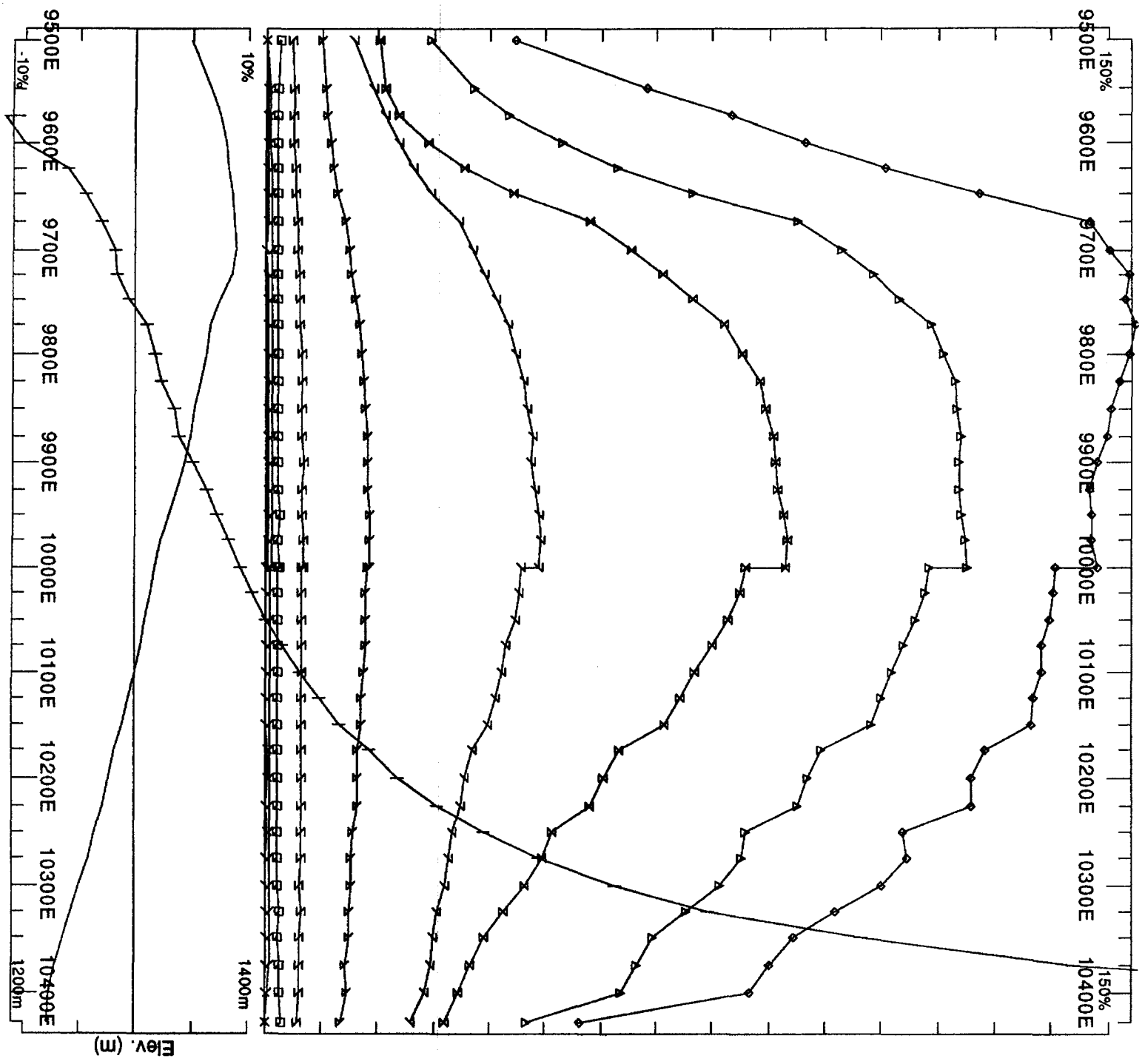
Loop: 1 Line: 11700N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 25/7/9 Reduced : 28/7/9 Plotted : 30/11/9



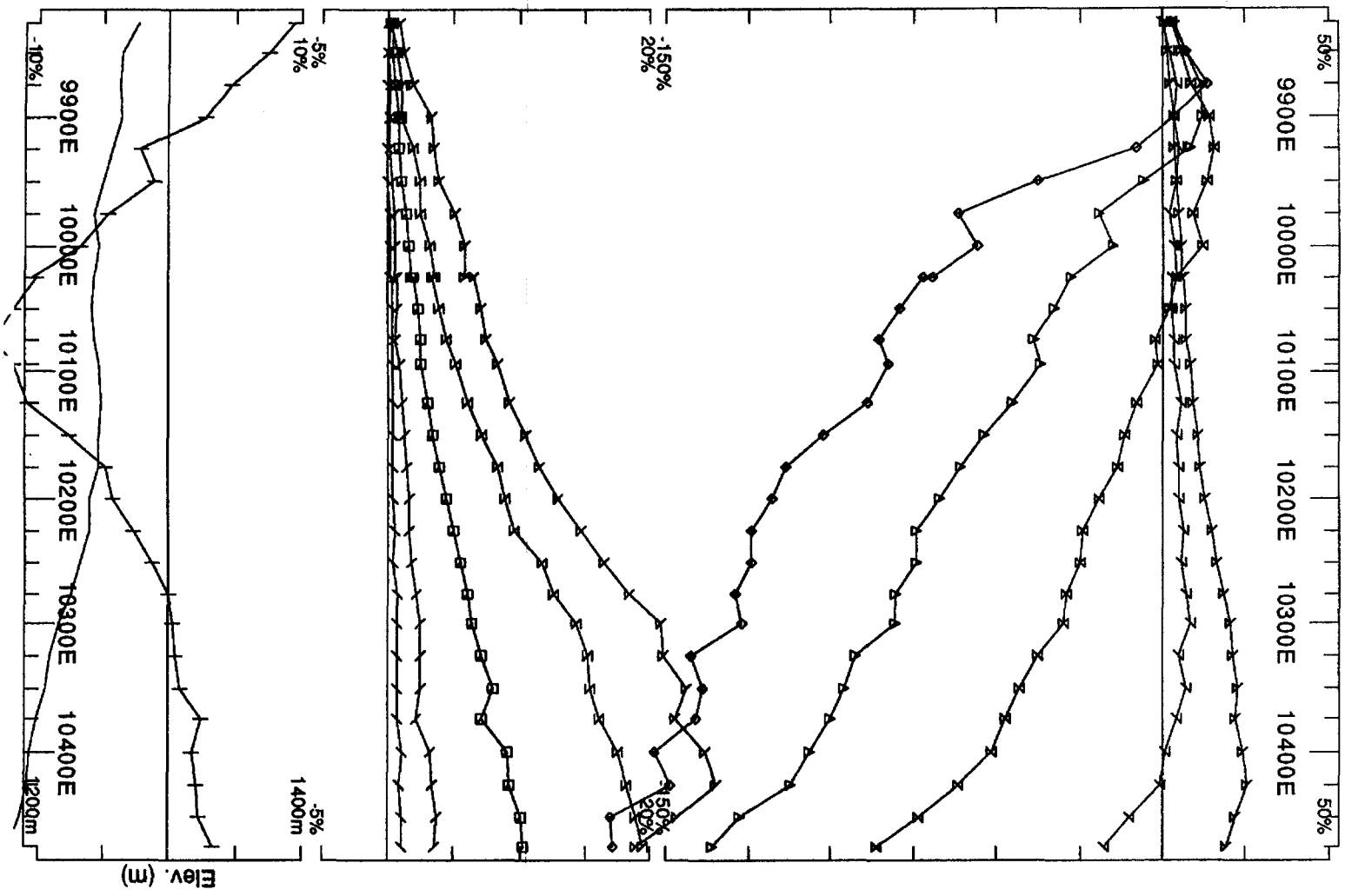
Loop: 1 Line: 11800N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 24/7/ Reduced : 28/7/9 Plotted : 30/11/9



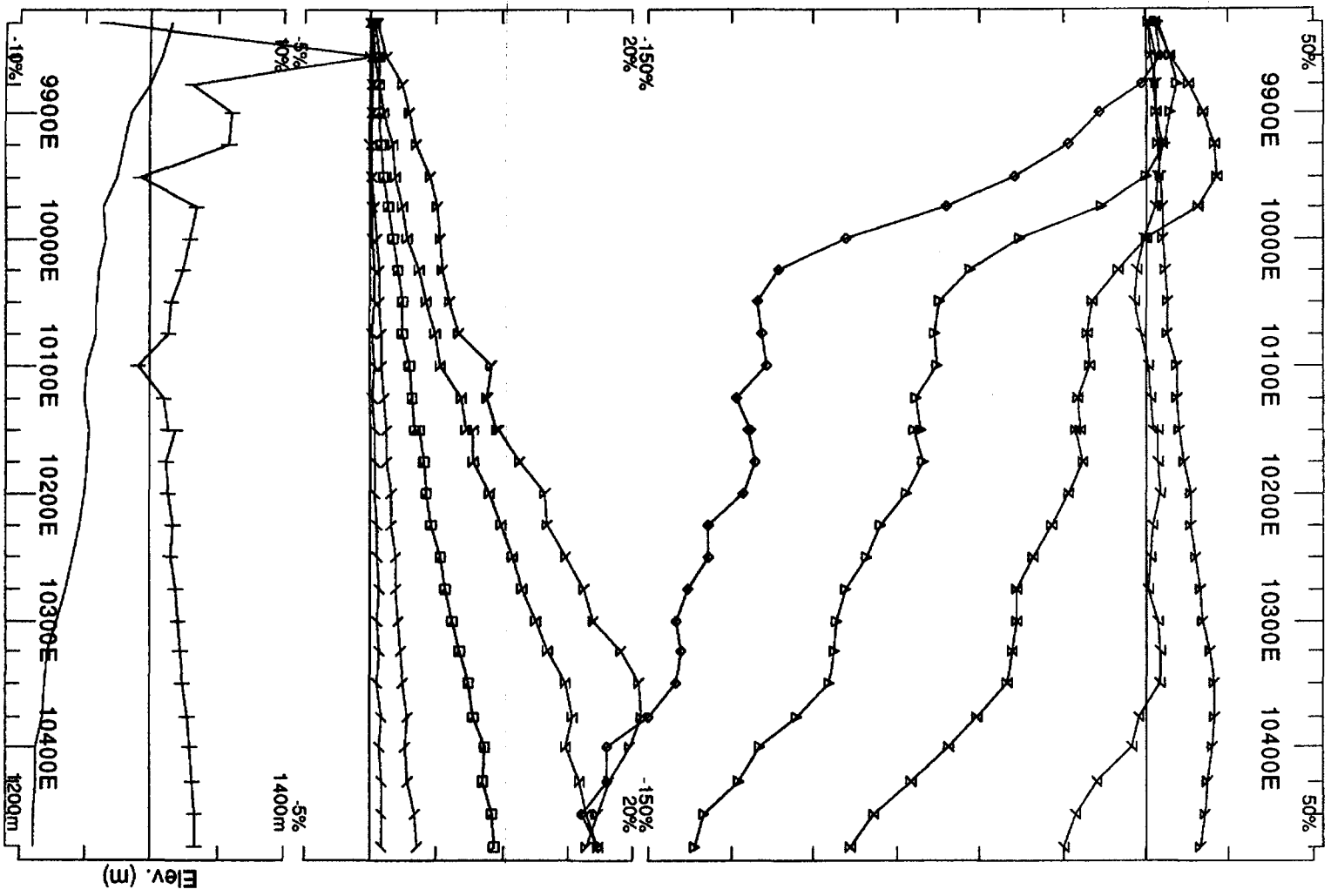
Loop: 1 Line: 11900N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 25/7/9 Reduced : 28/7/9 Plotted : 30/11/9



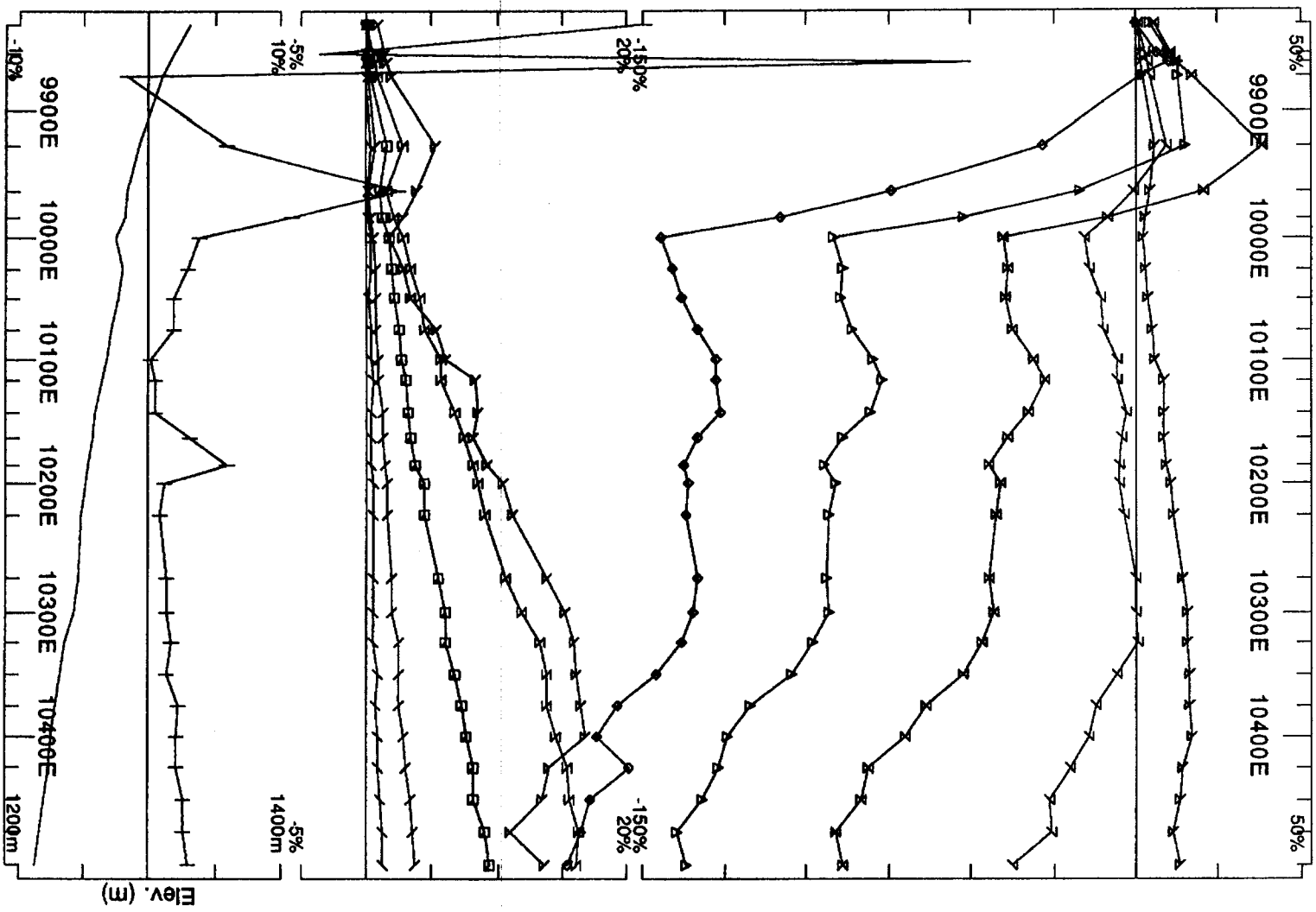
Loop: 1 Line: 12000N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 30/11/97



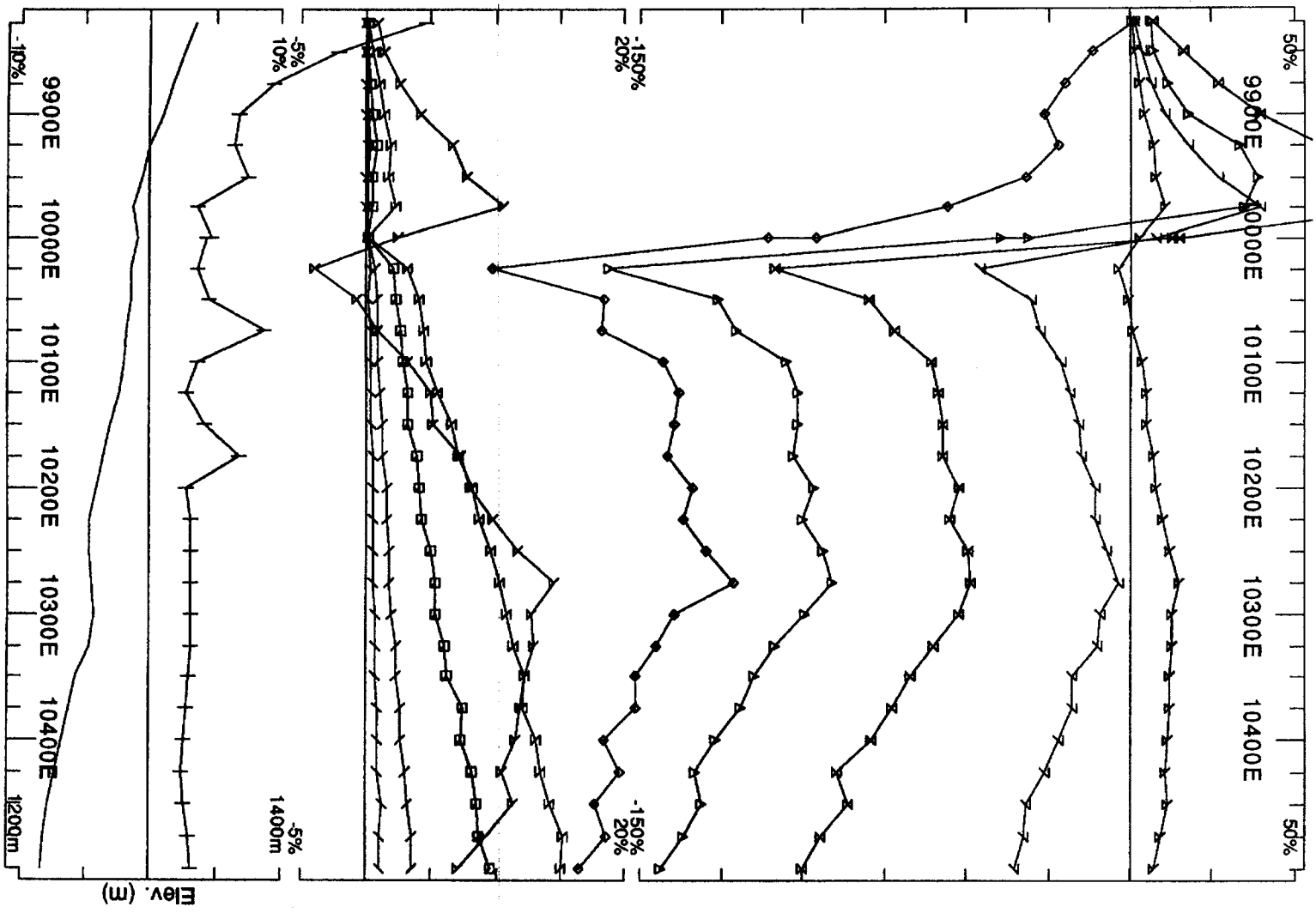
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 10900N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 30/11/9



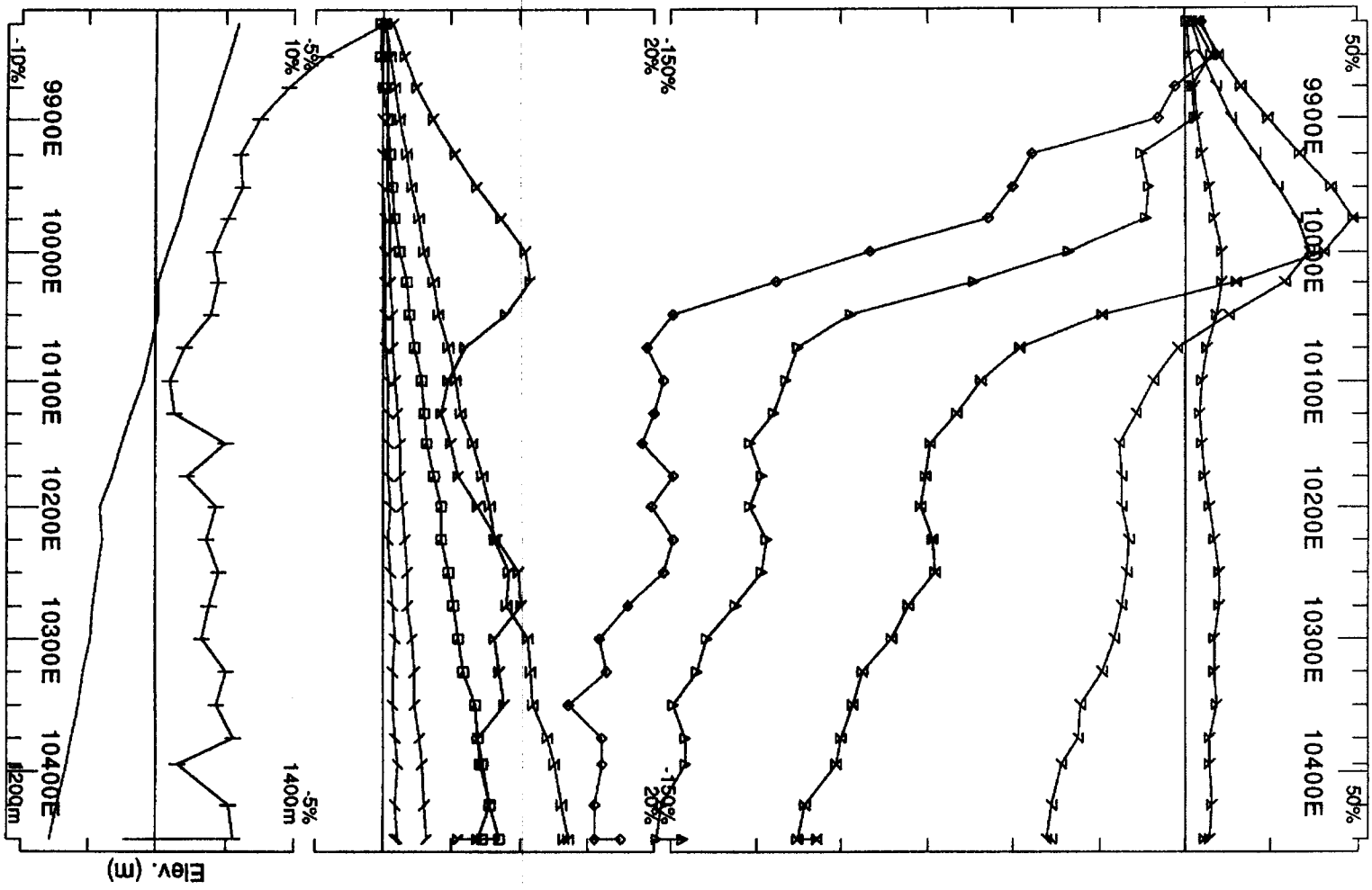
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11000N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/ Reduced : 28/7/9 Plotted : 30/11/9



Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11100N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 30/11/9



Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11200N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 30/11/9



Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11300N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
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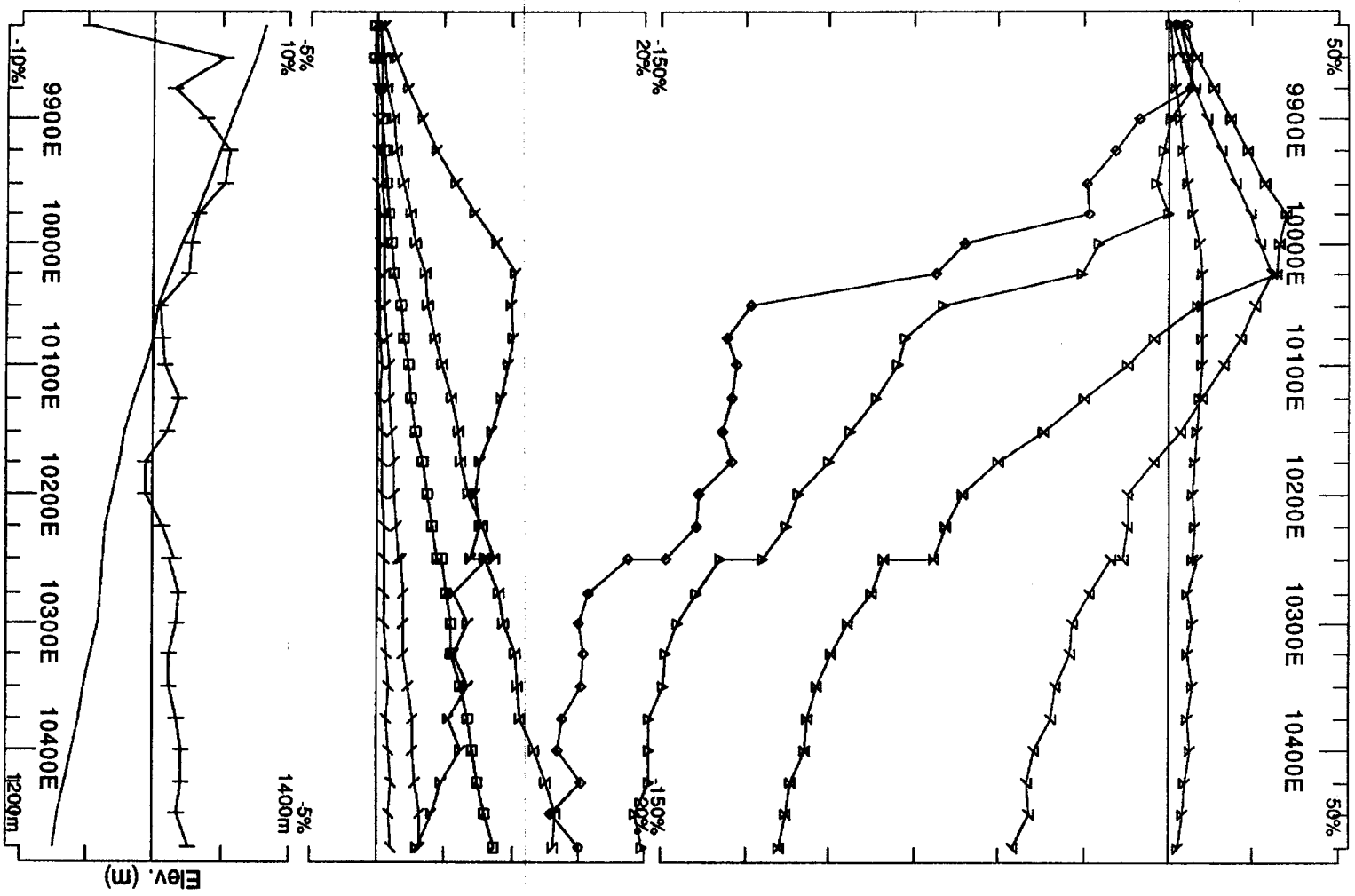
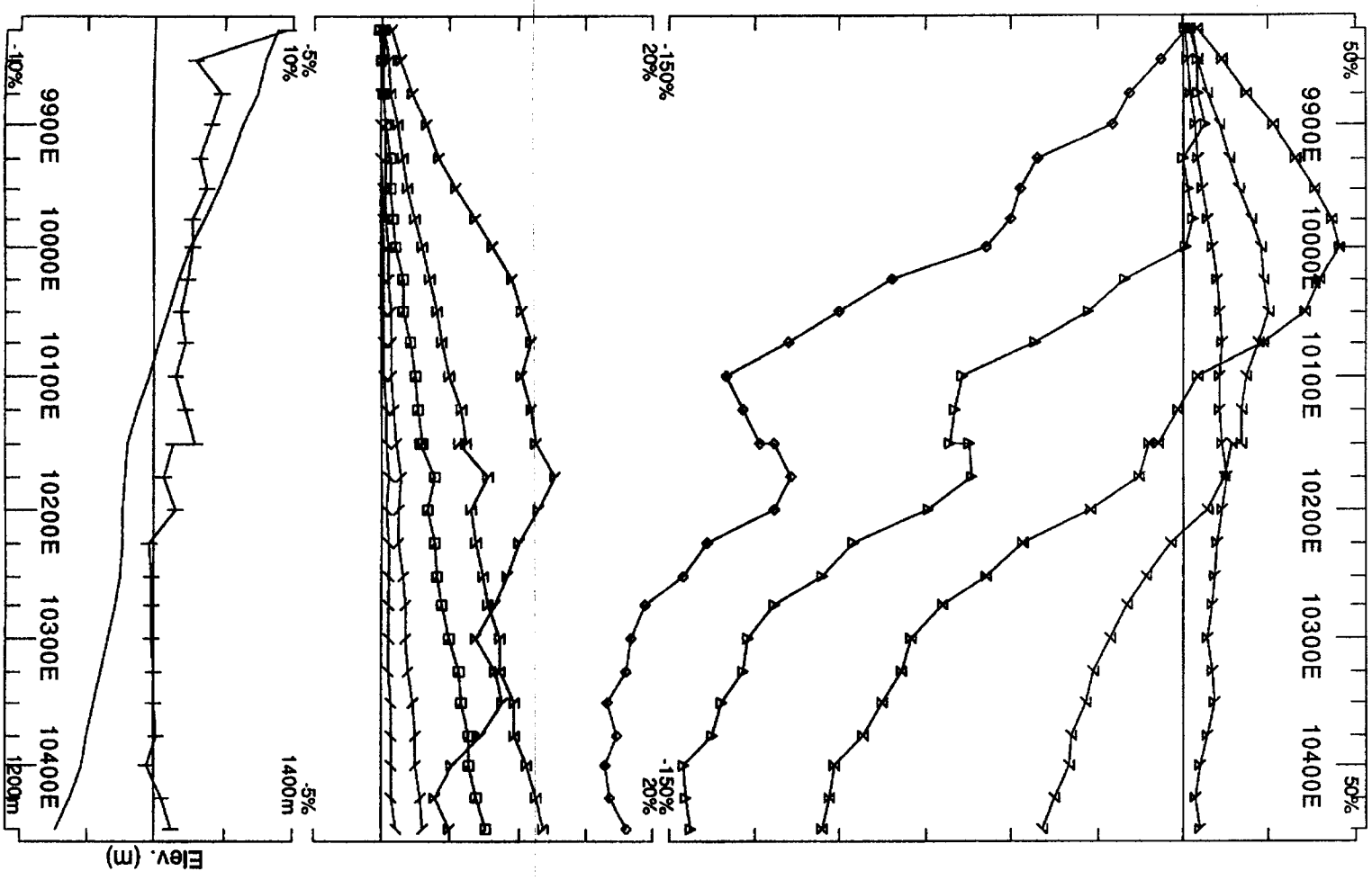
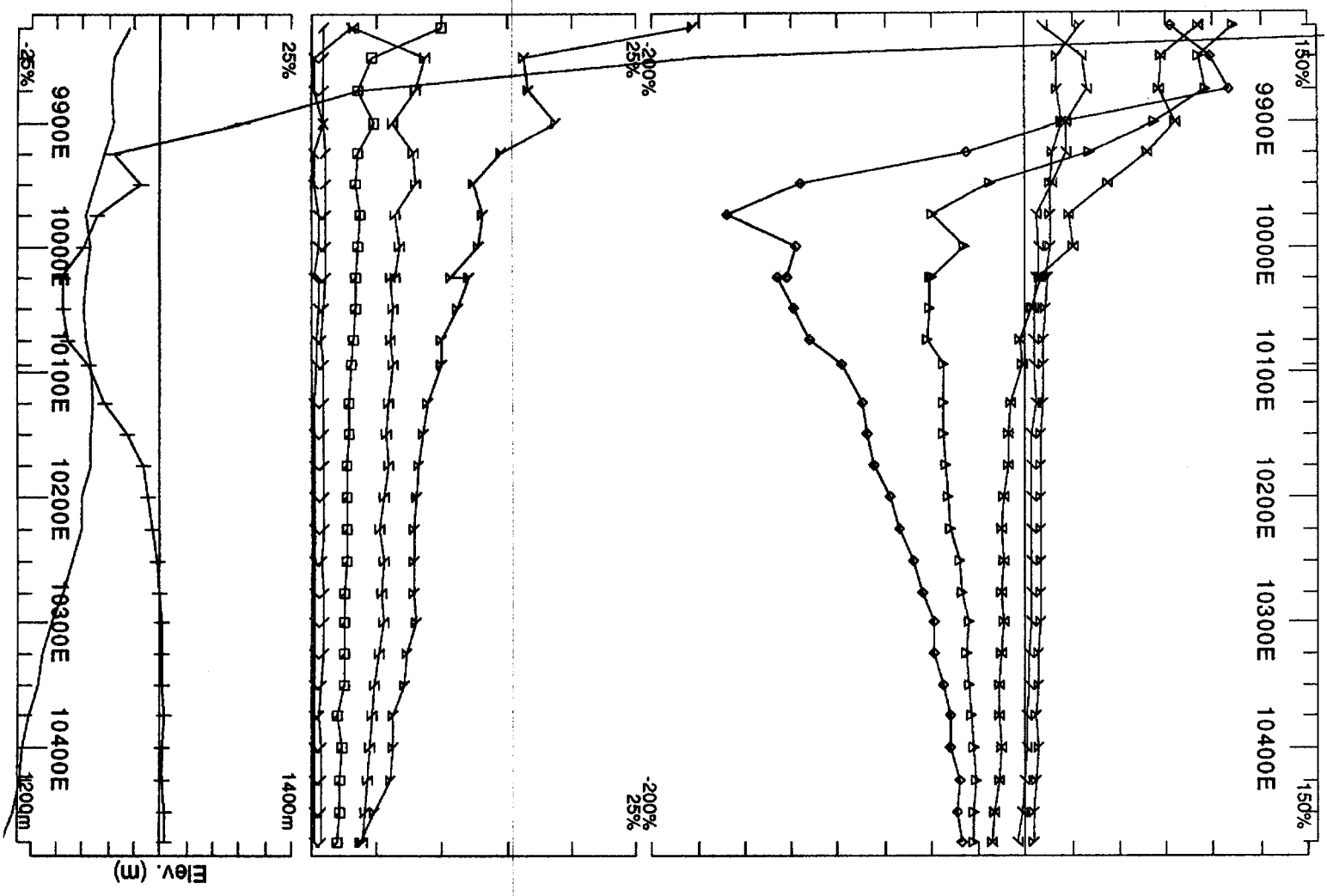


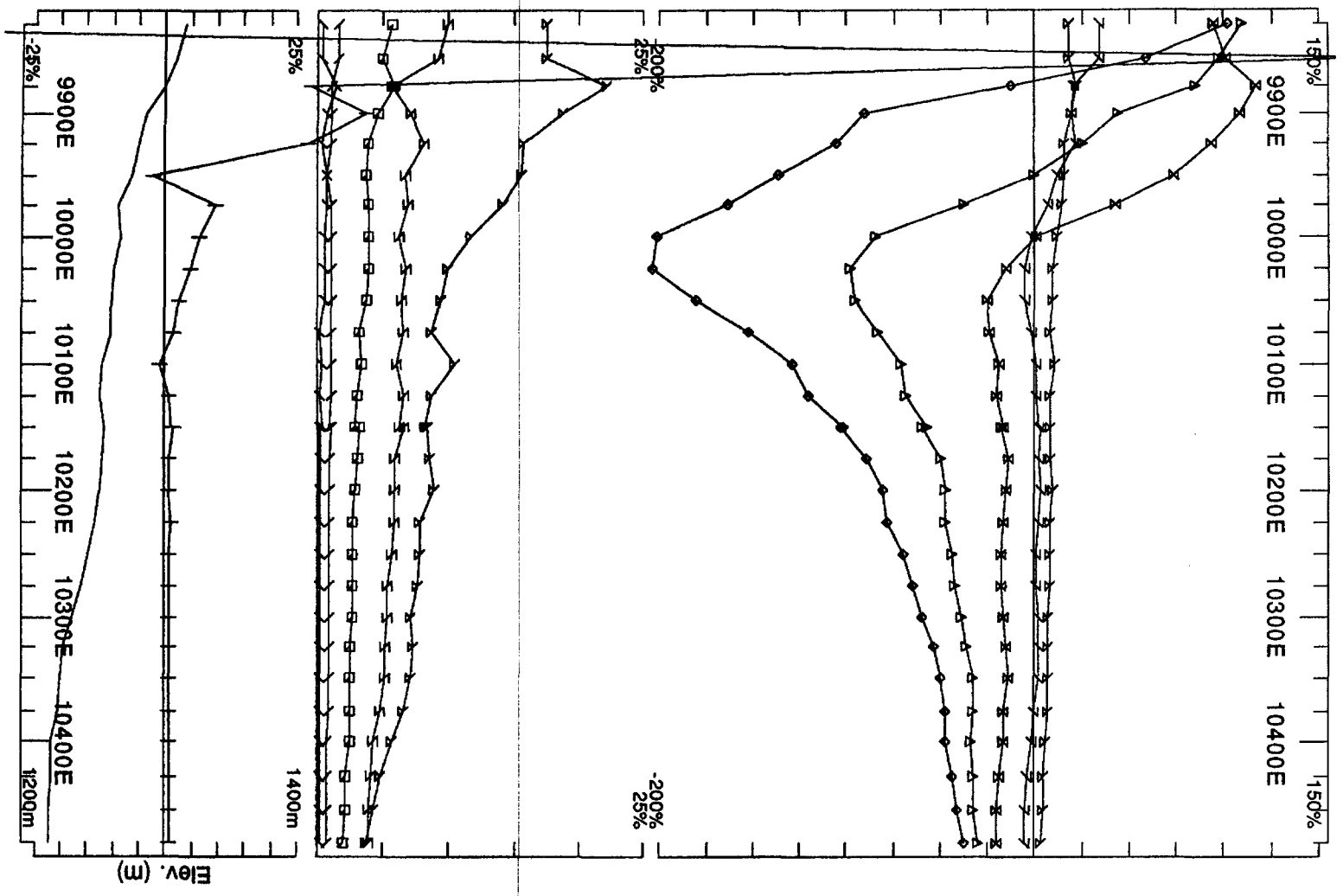
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11400N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 30/11/9



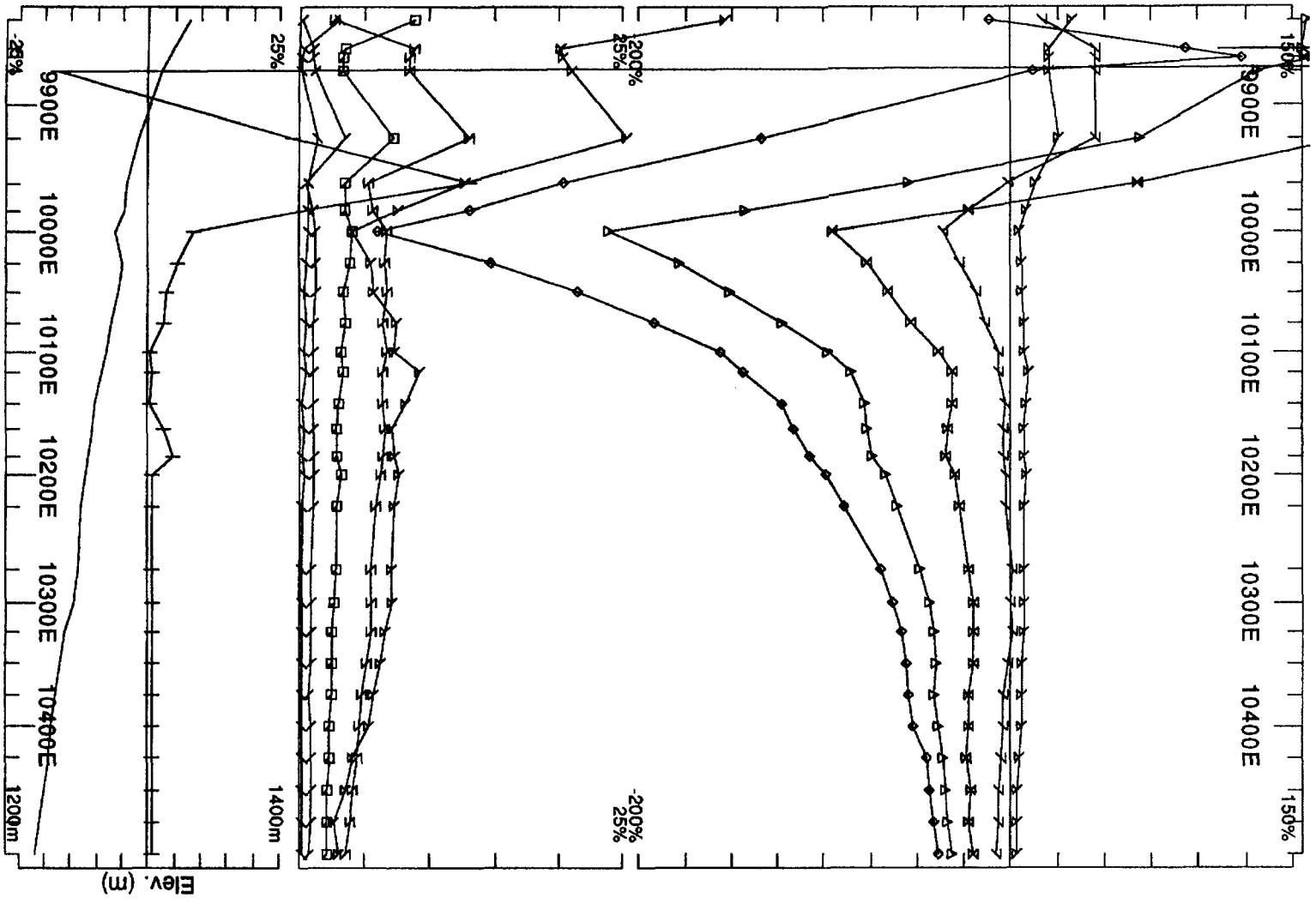
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11500N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Plotted : 30/11/9



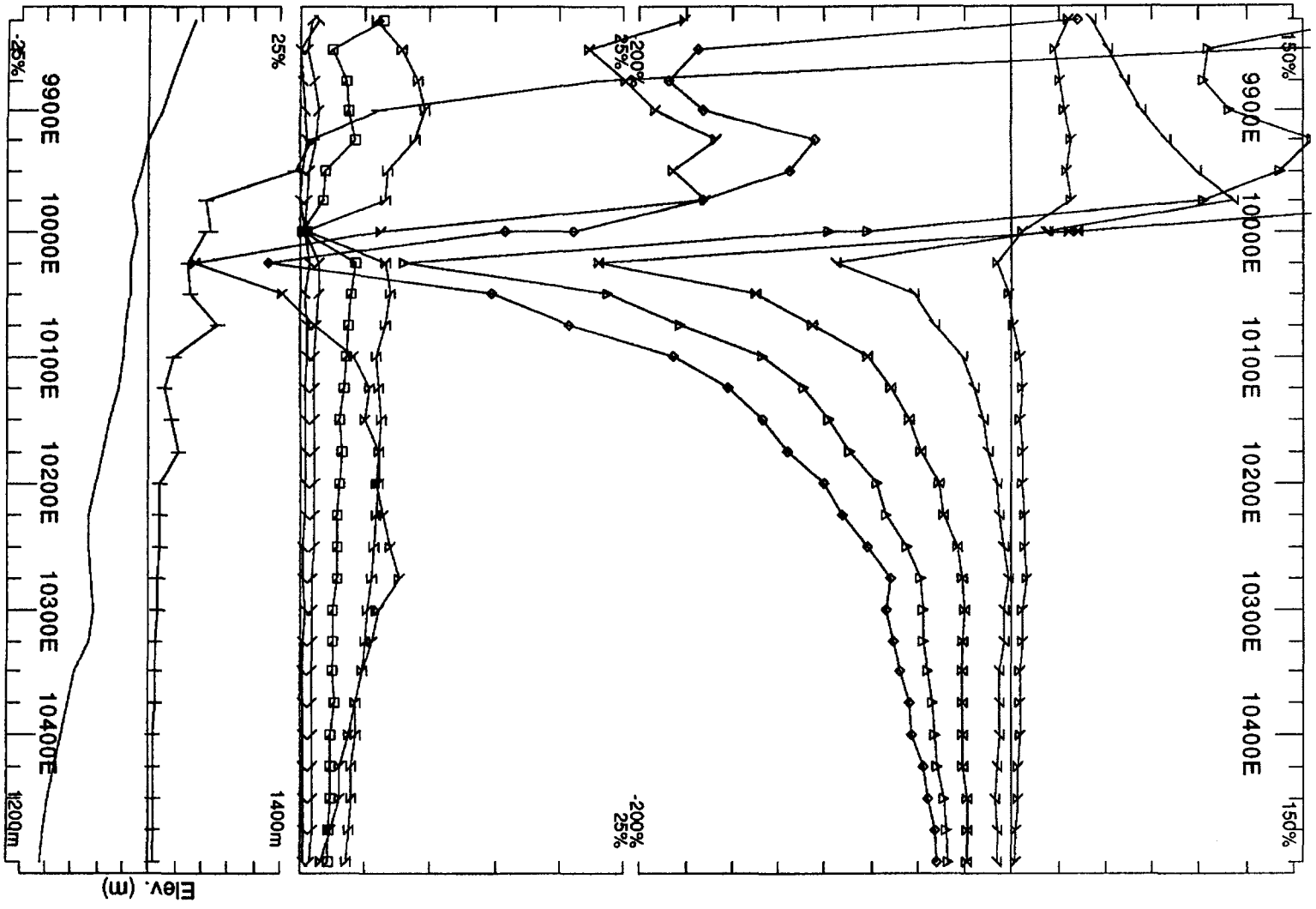
Loop: 2 Line: 10900N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 3/12/97



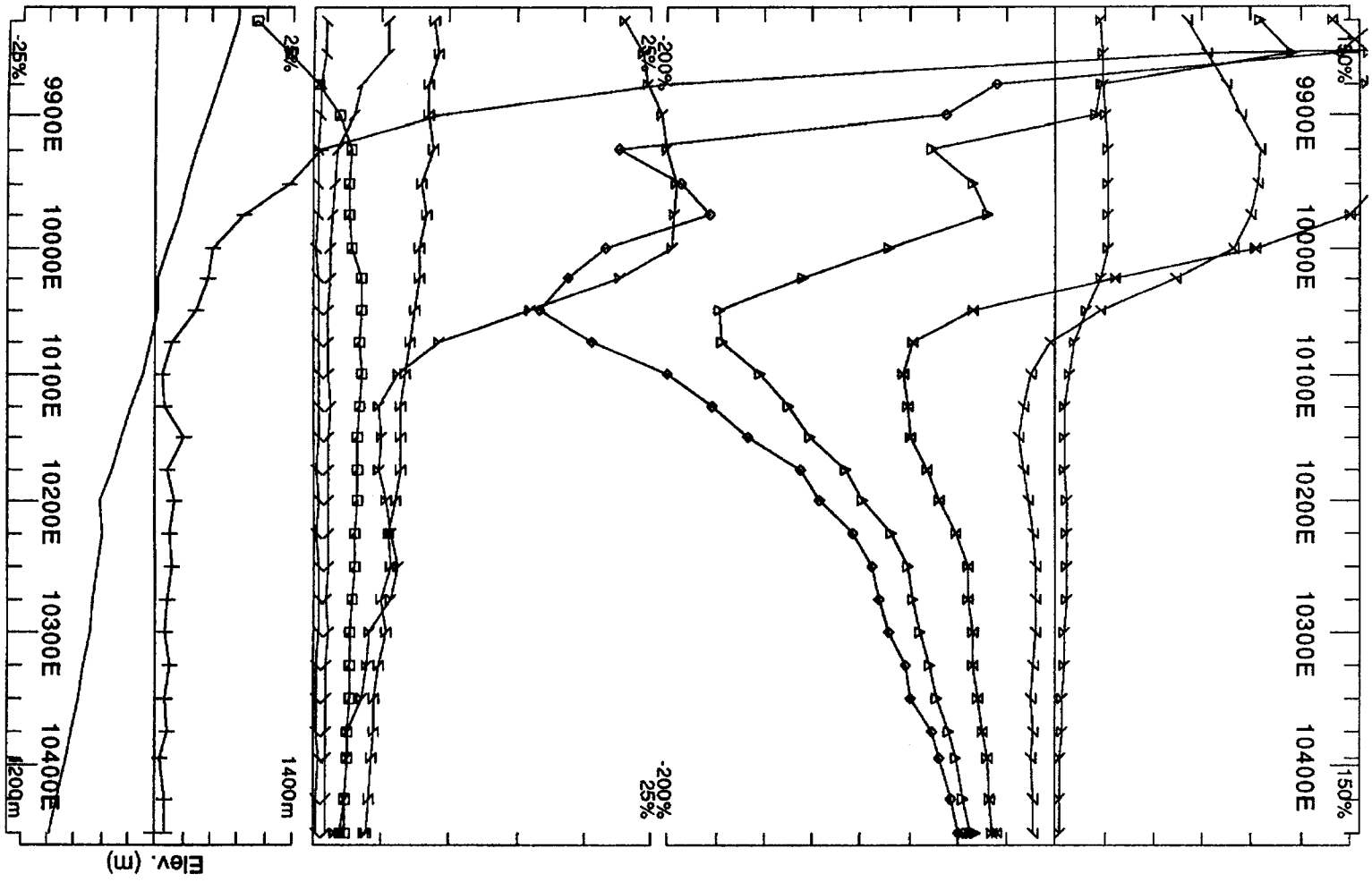
Loop: 2 Line: 11000N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 3/12/97



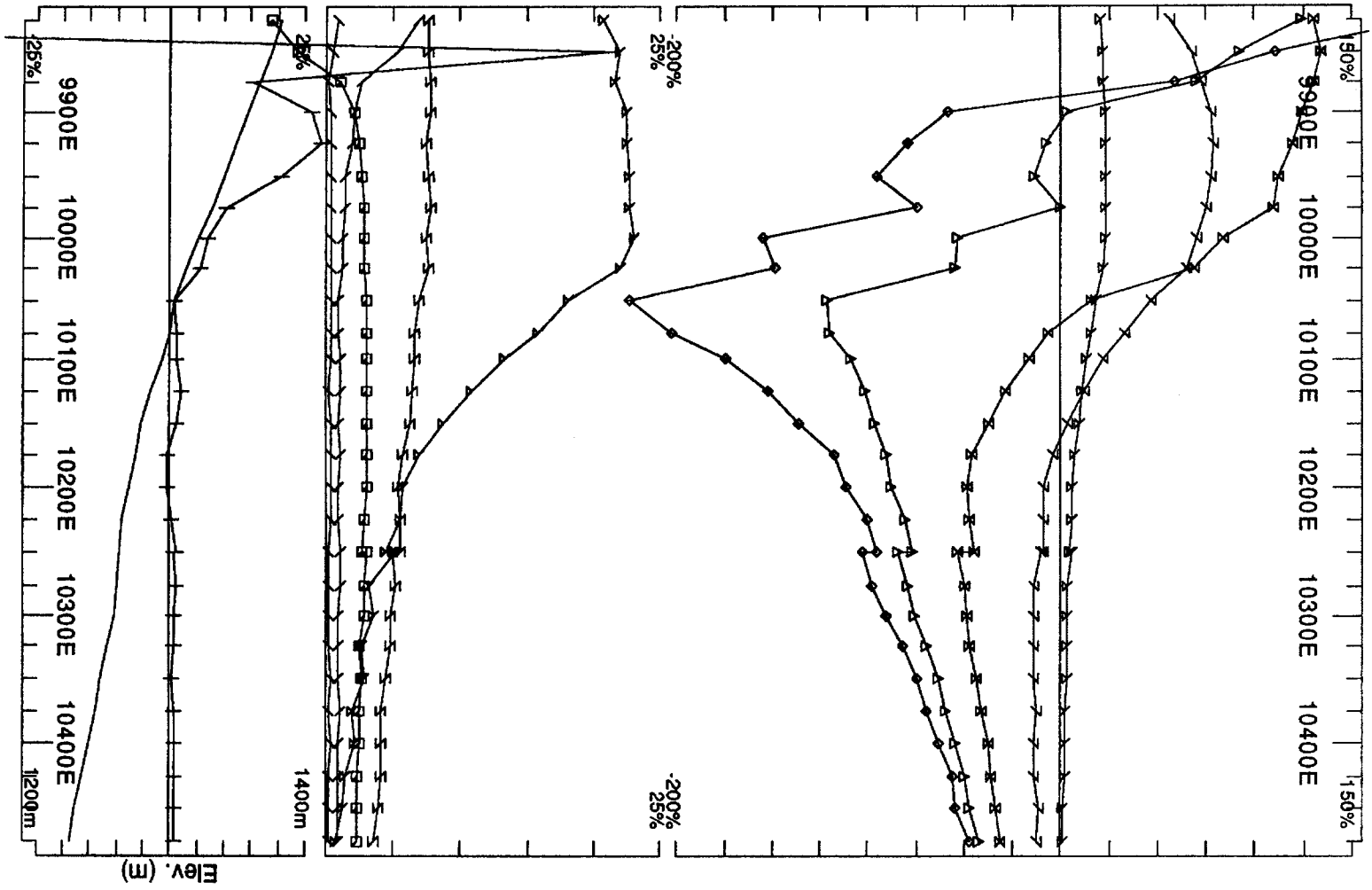
Loop: 2 Line: 11100N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 3/12/97



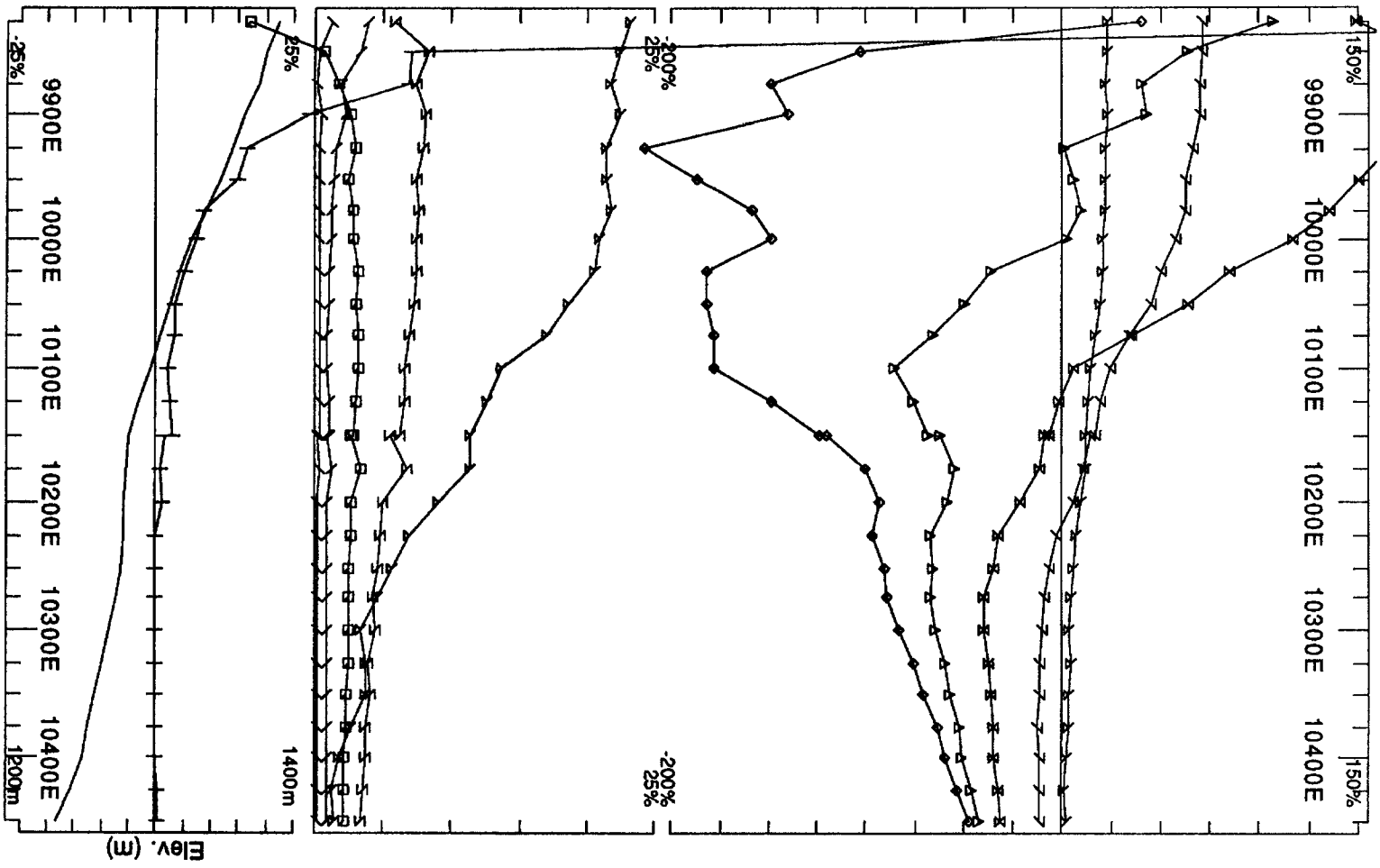
Loop: 2 Line: 11200N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 3/12/97



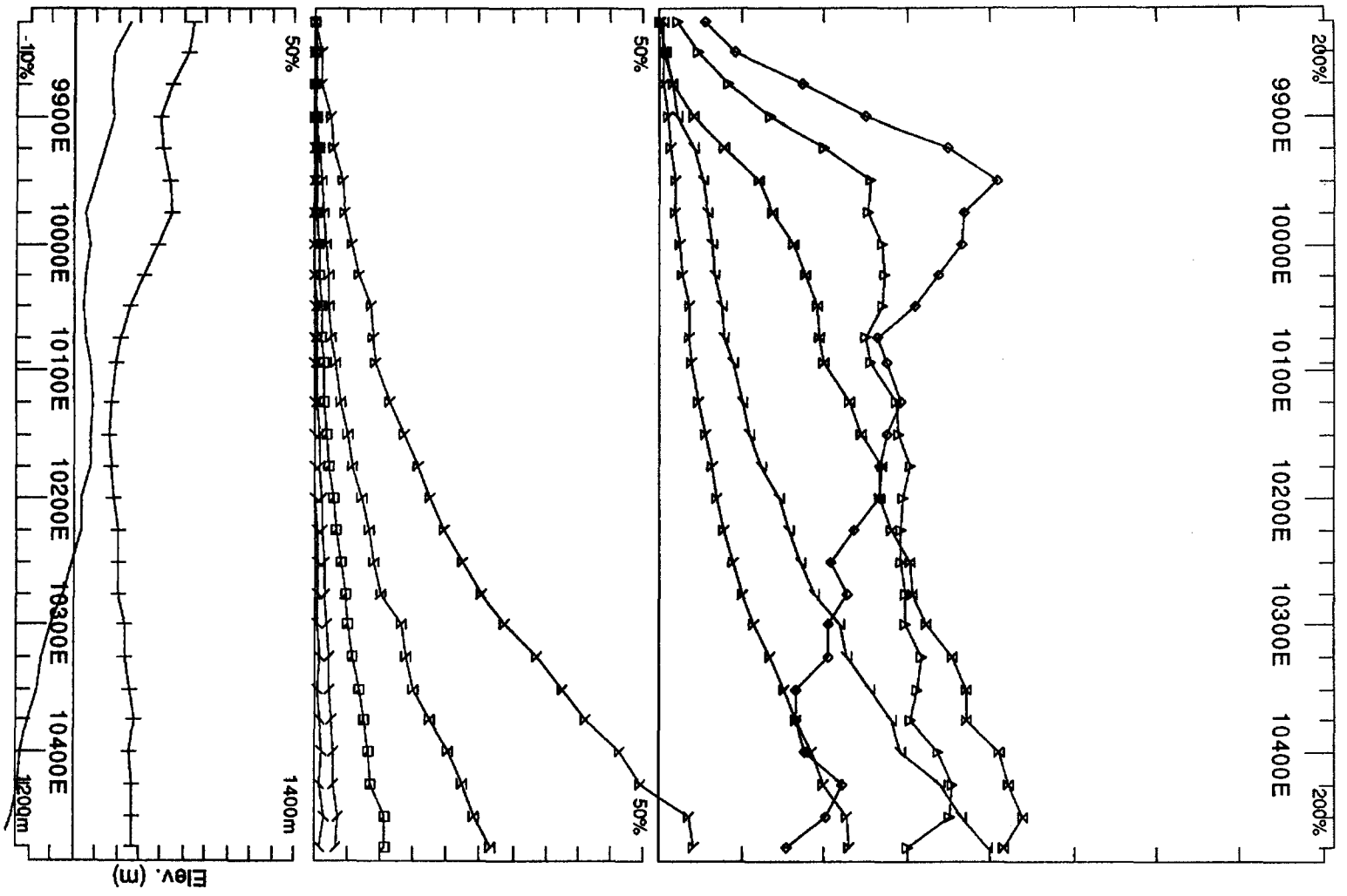
Loop: 2 Line: 11300N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 3/12/97



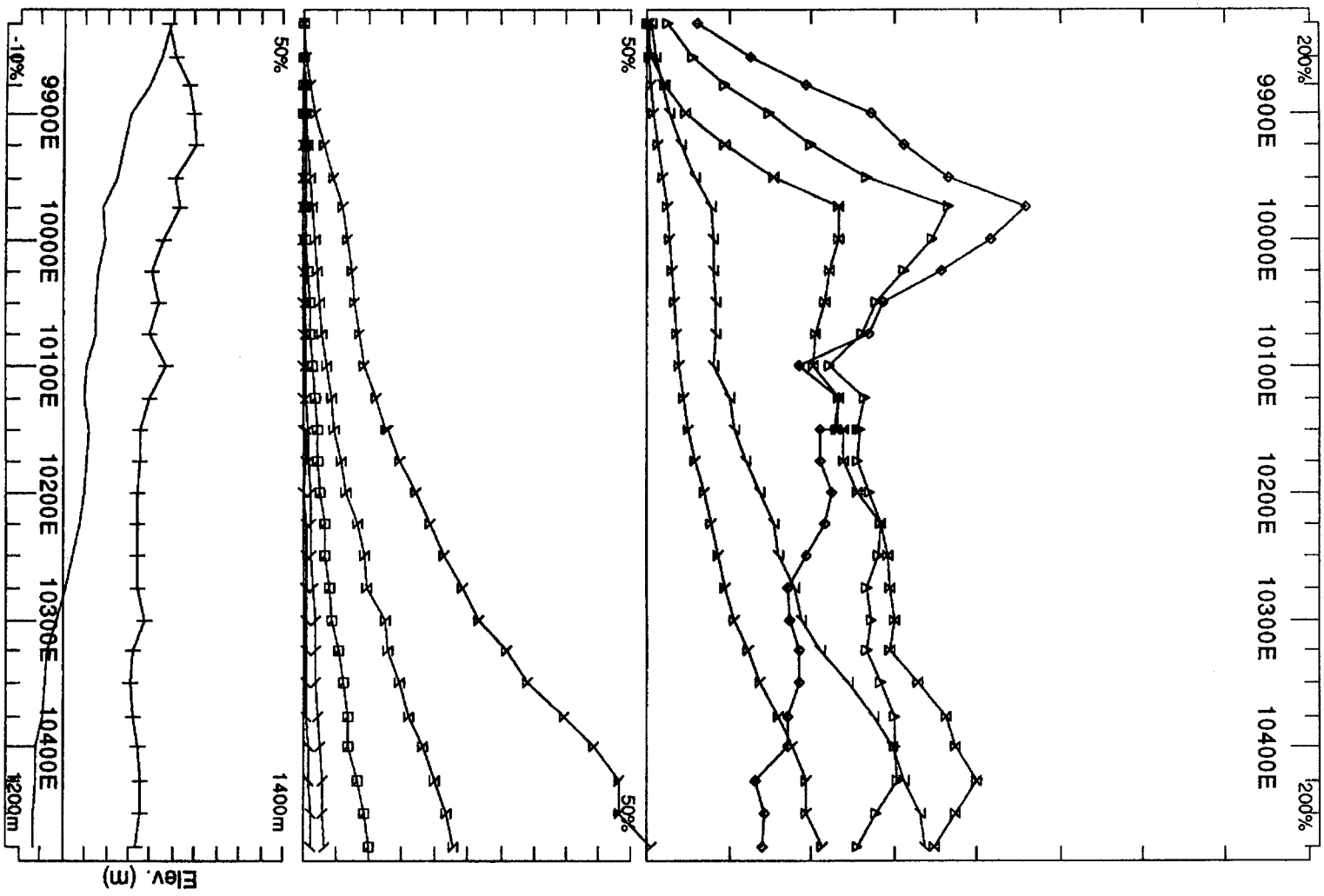
Loop: 2 Line: 11400N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 3/12/97



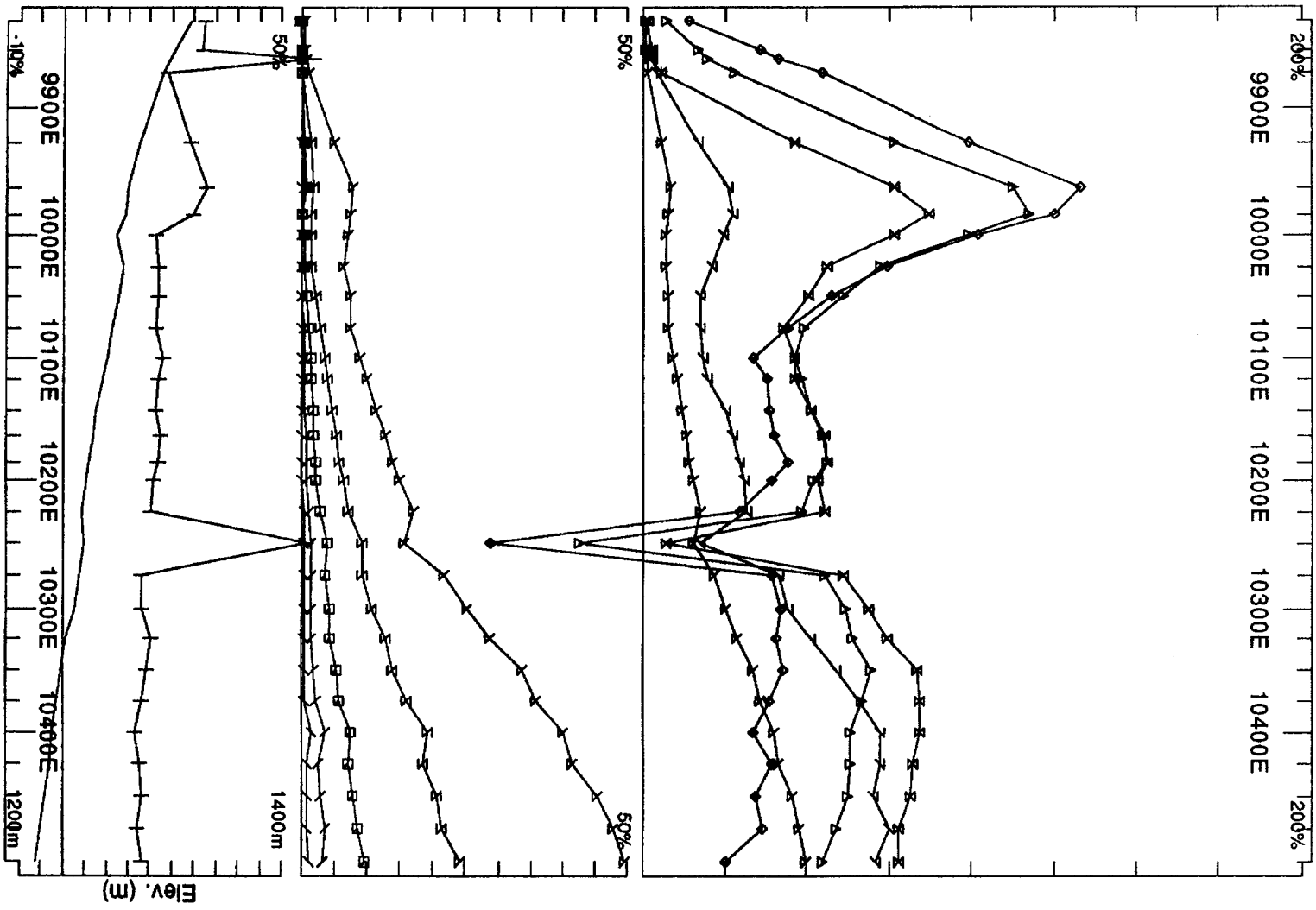
Loop: 2 Line: 11500N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Plotted : 3/12/97



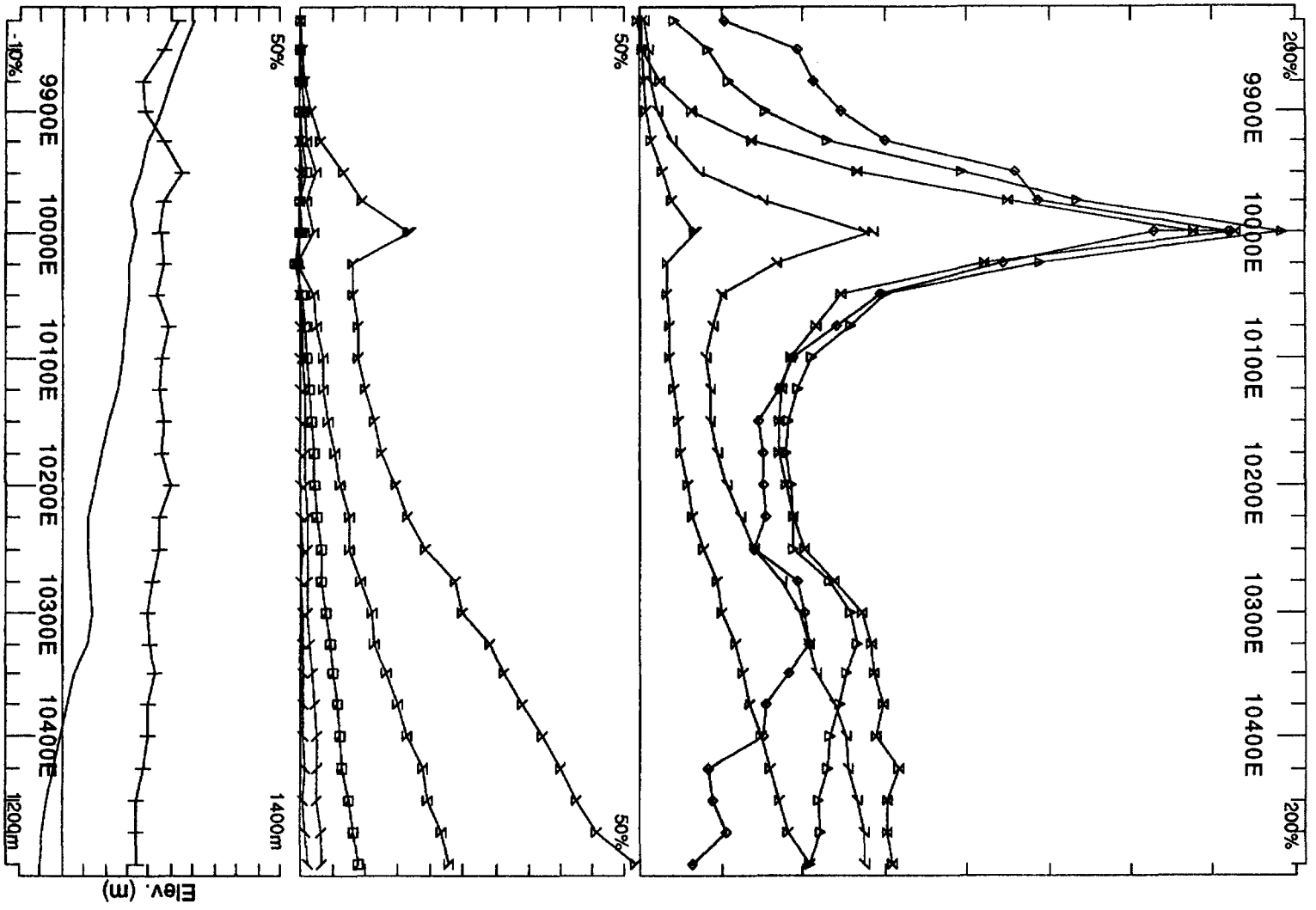
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 10900N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 8/12/97



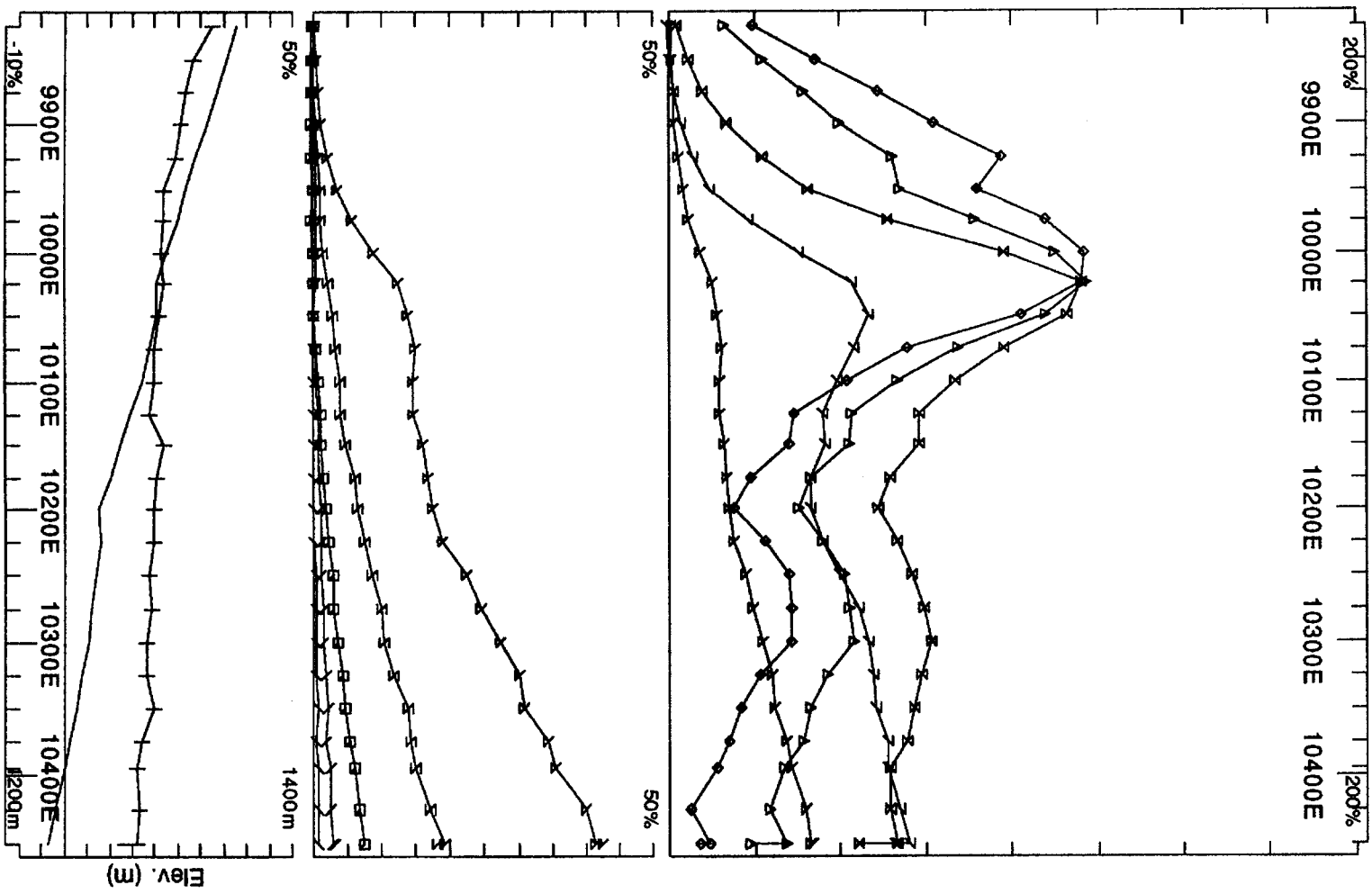
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11000N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/ Reduced : 28/7/ Plotted : 8/12/97



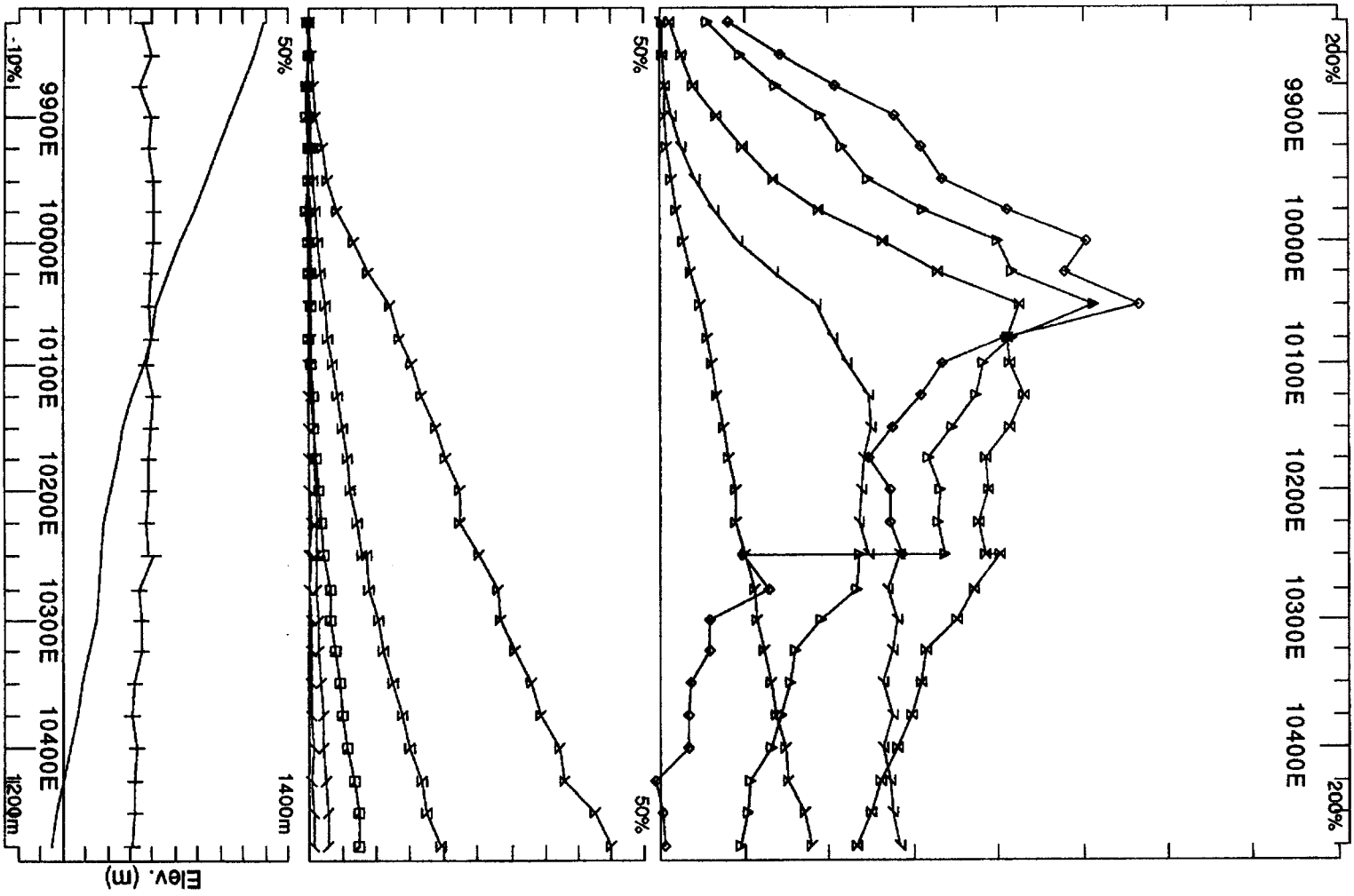
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11100N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 8/12/97



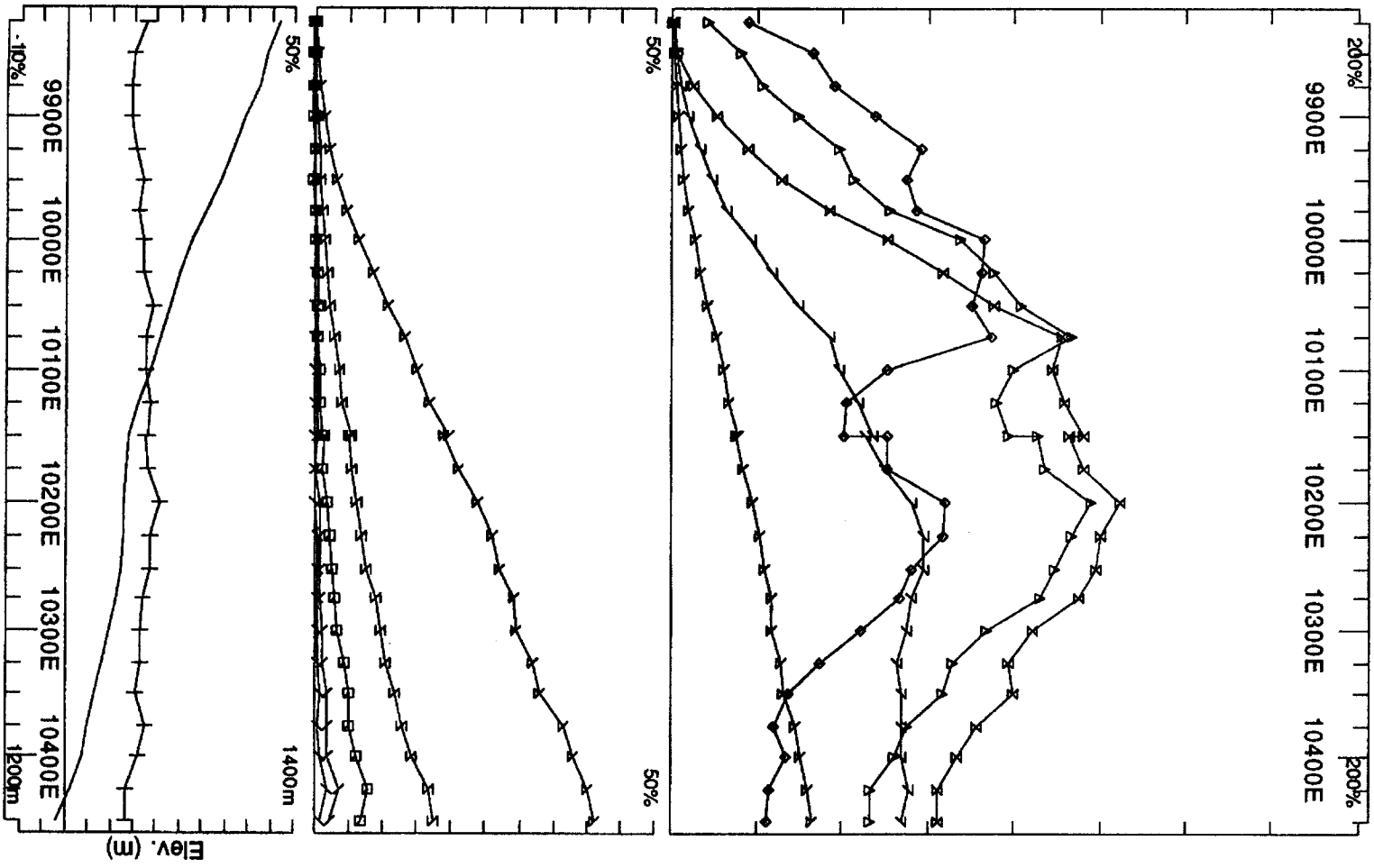
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11200N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/ Plotted : 8/12/97



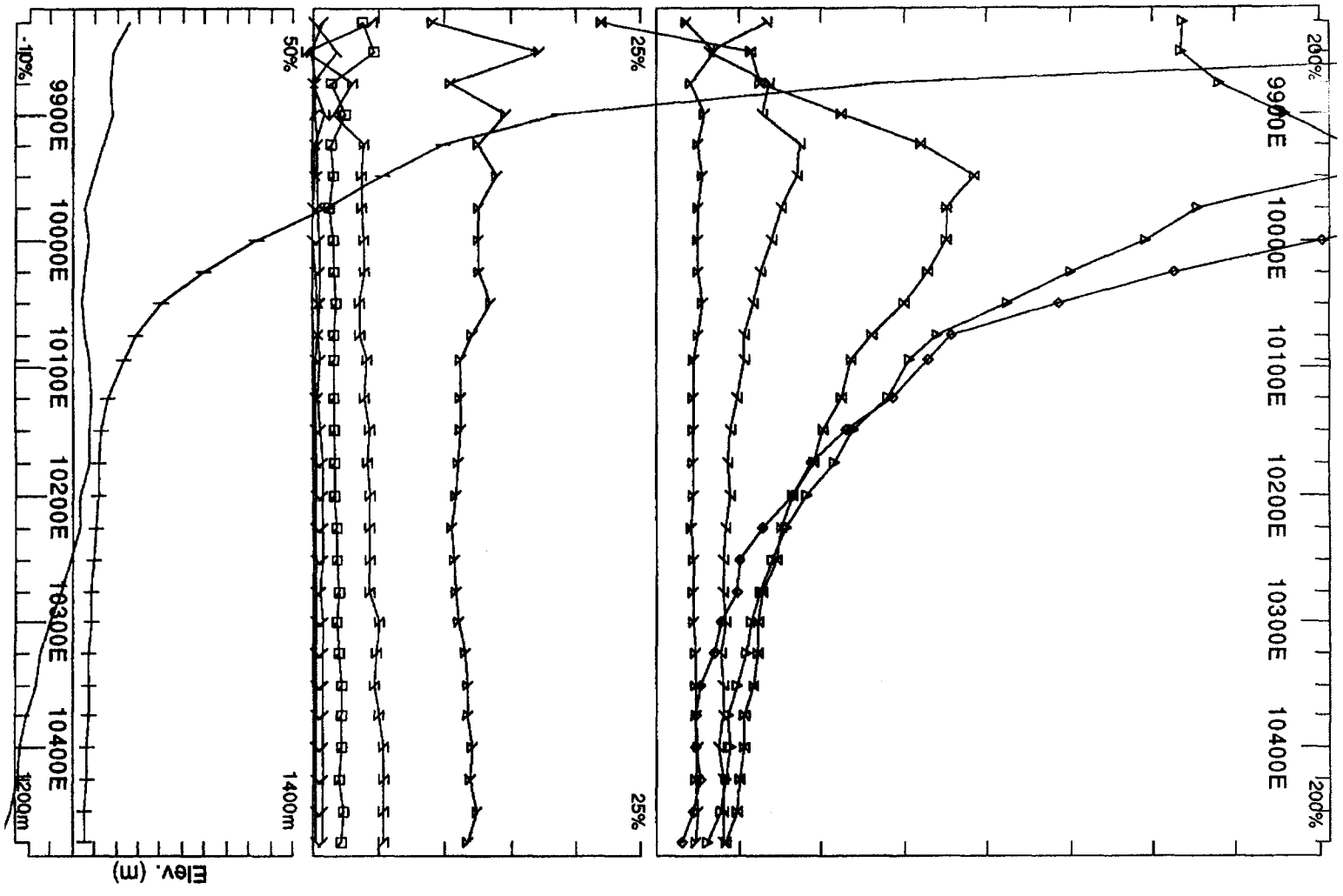
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11300N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/ Plotted : 8/12/97



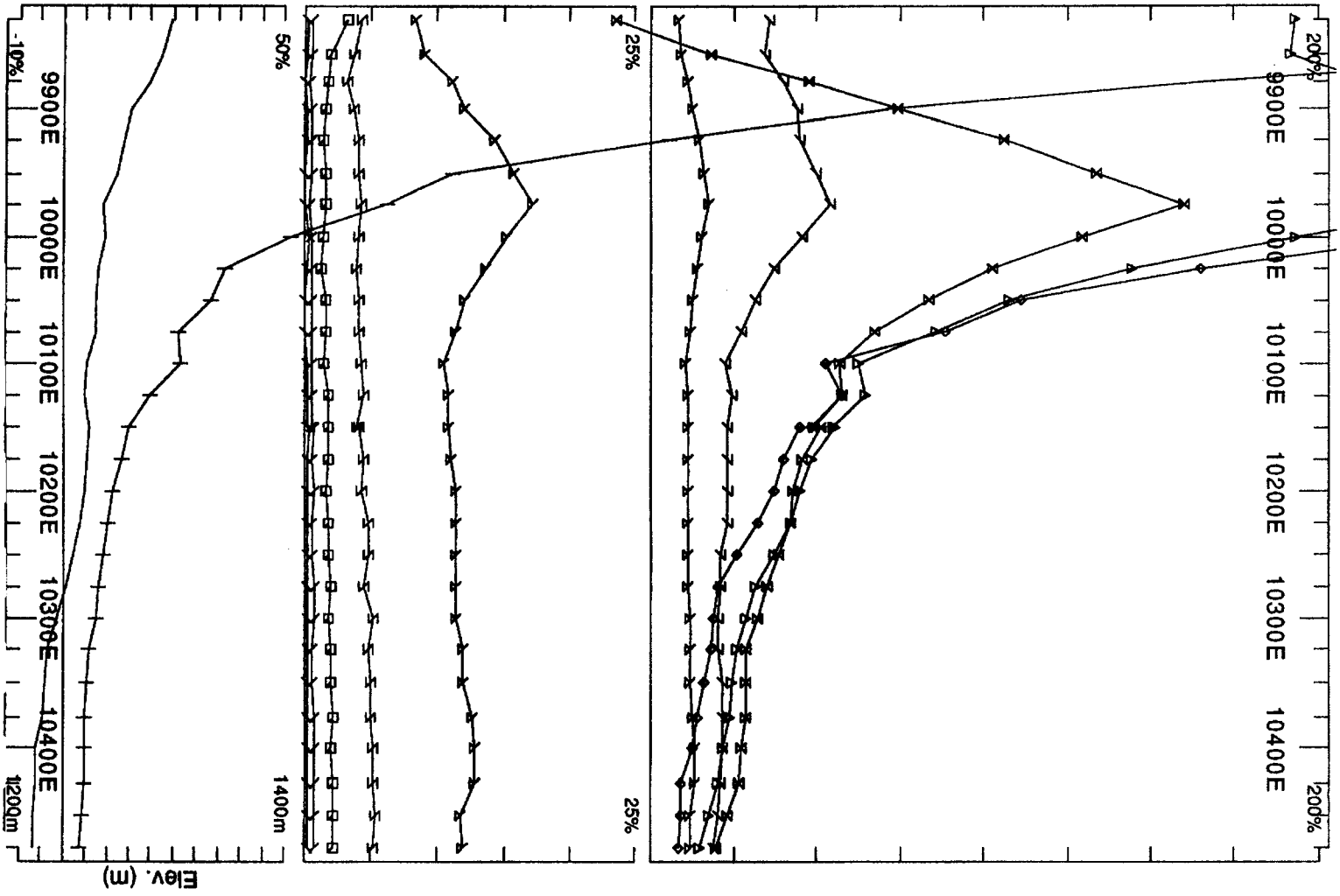
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11400N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 8/12/97



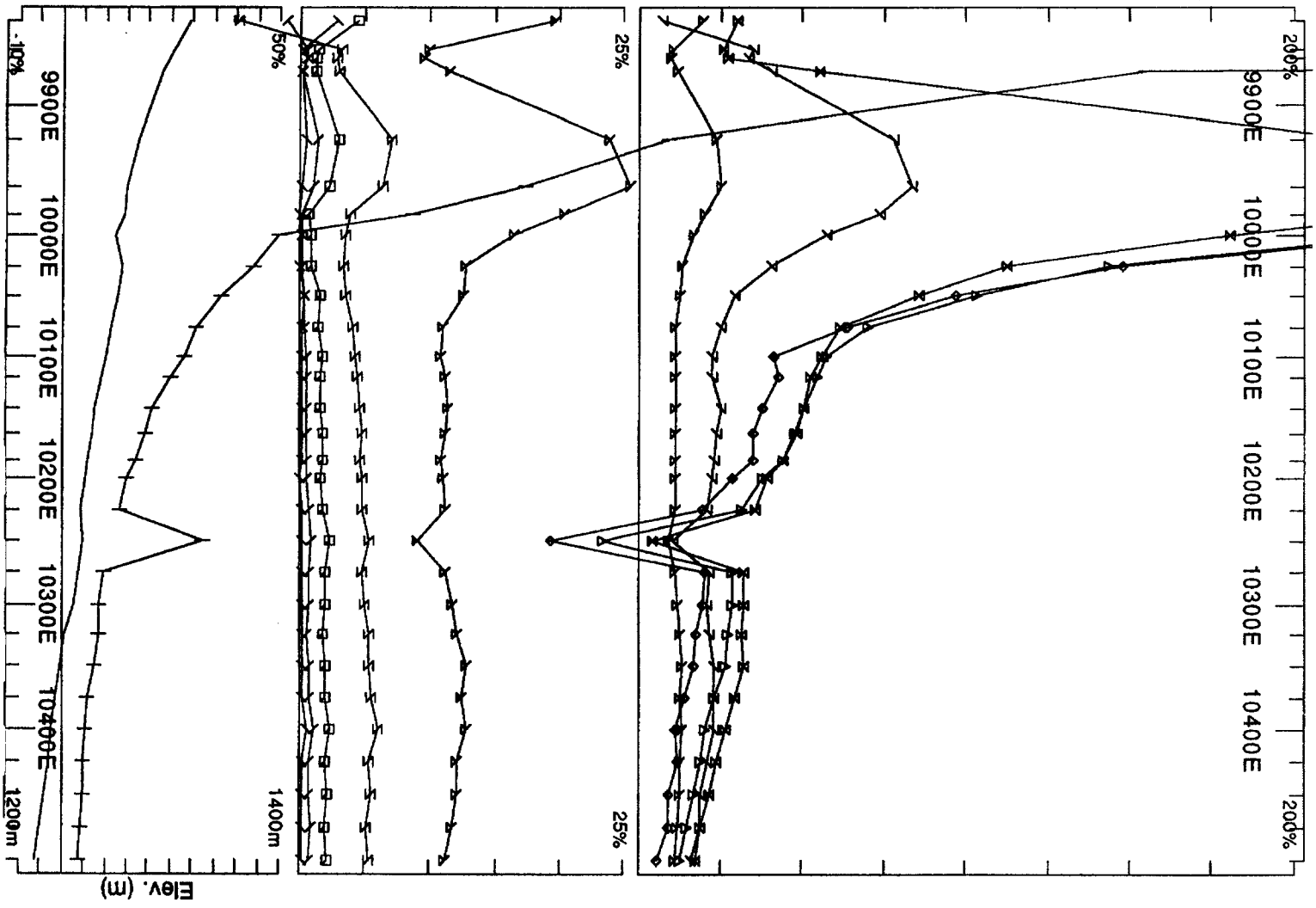
Loop: 2	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11500N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Plotted : 8/12/97



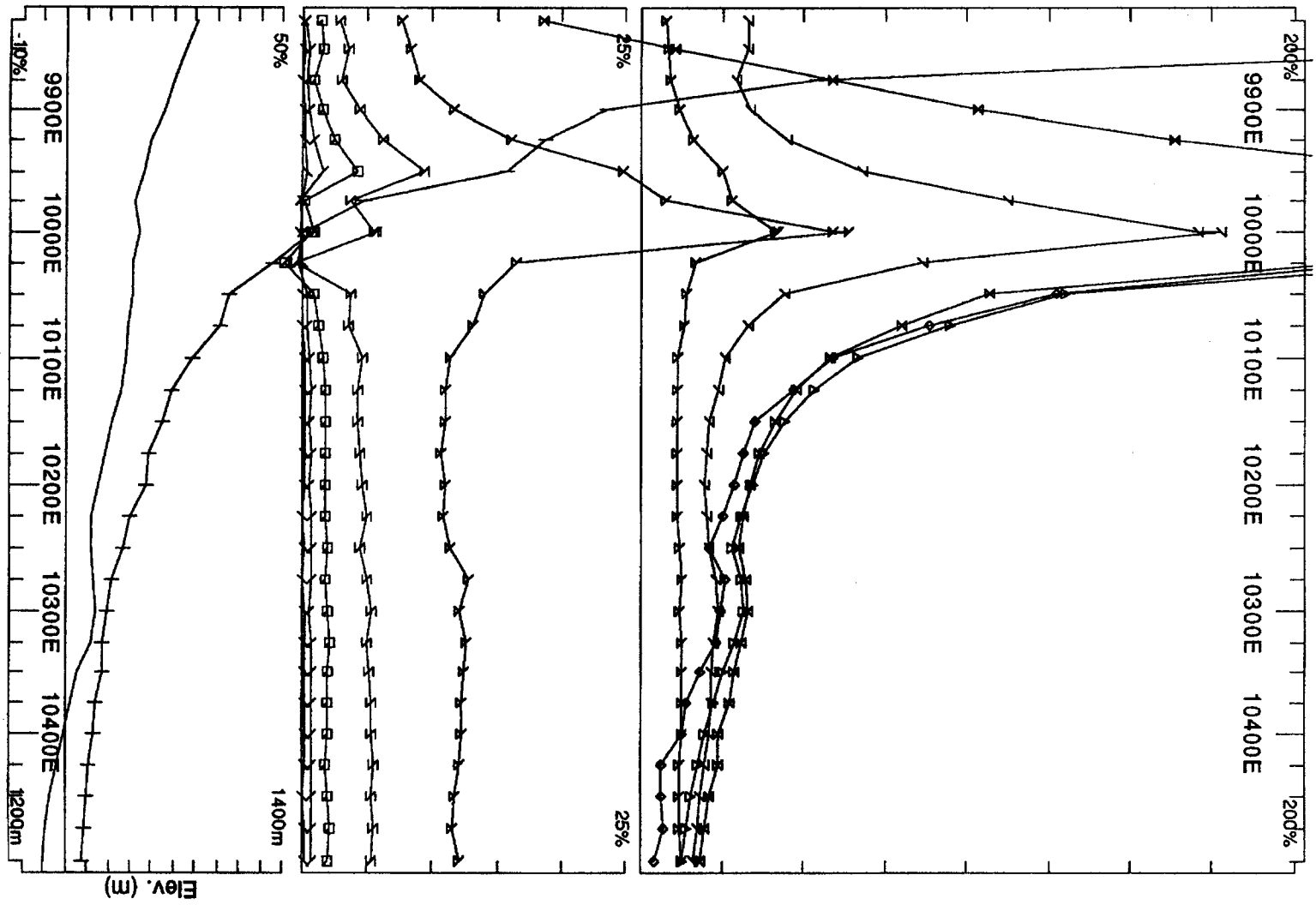
Loop: 2 Line: 10900N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 8/12/97



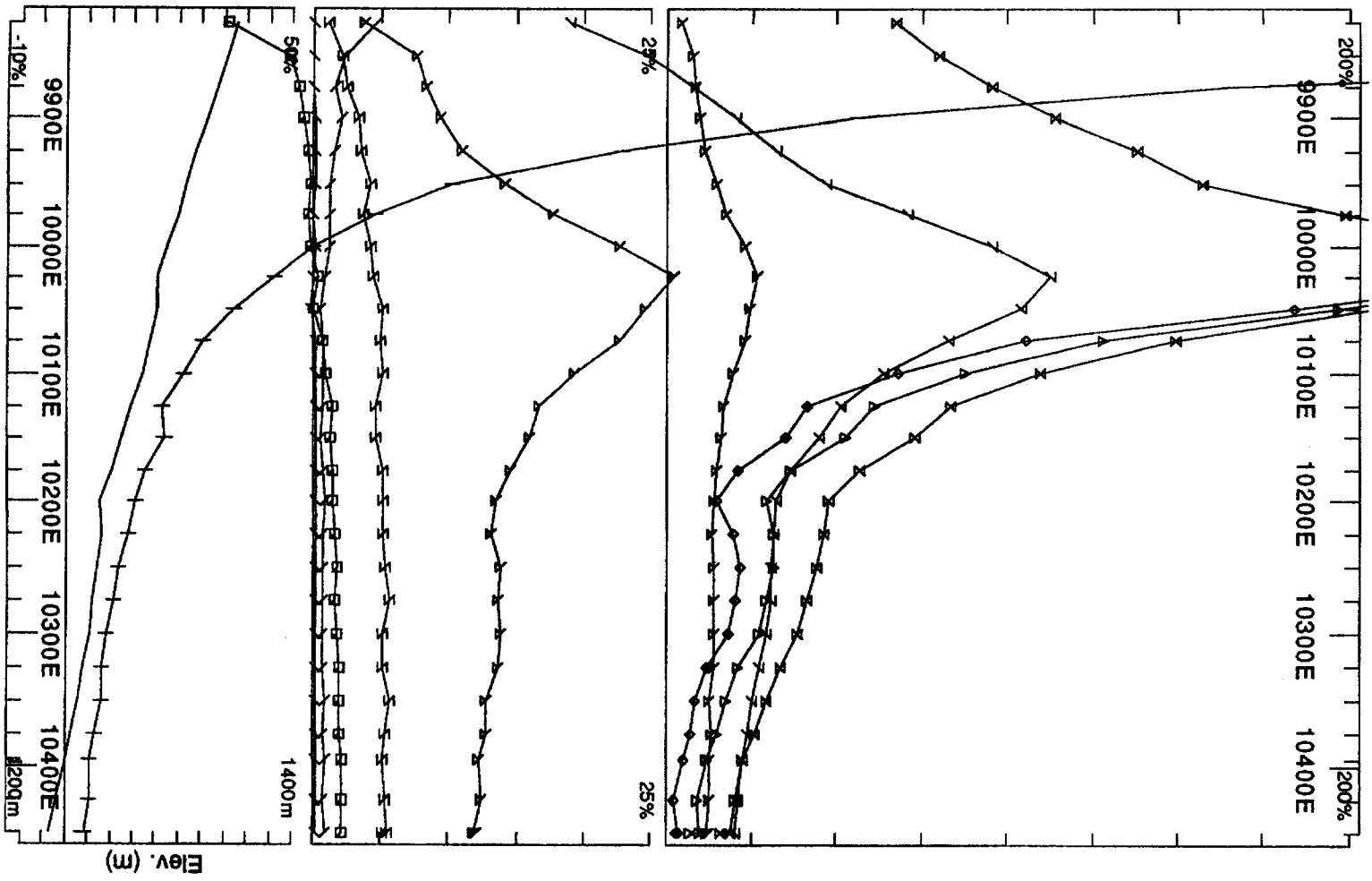
Loop: 2 Line: 11000N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 27/7/9 Reduced : 28/7/9 Plotted : 8/12/97



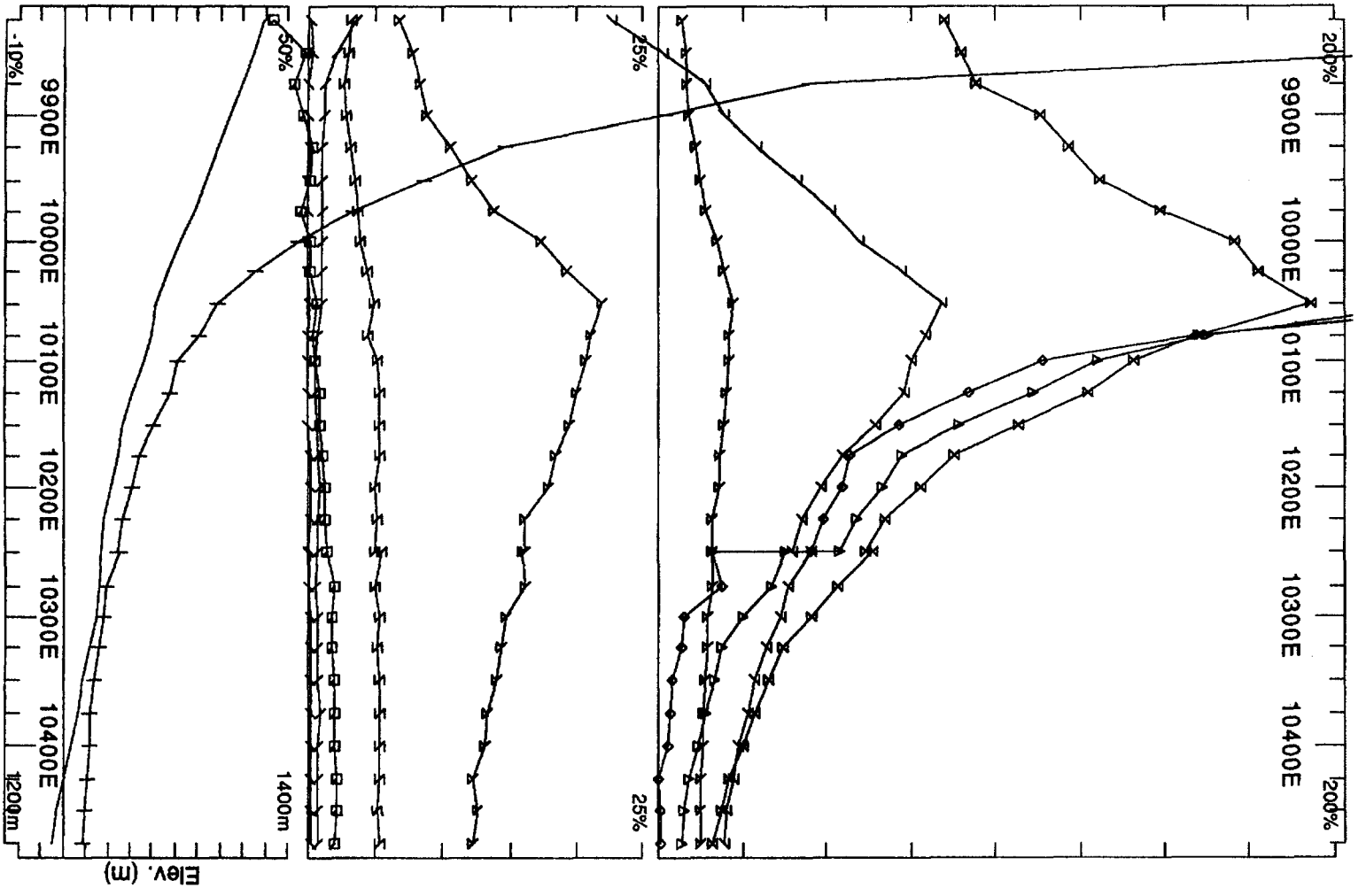
Loop: 2 Line: 11100N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 8/12/97



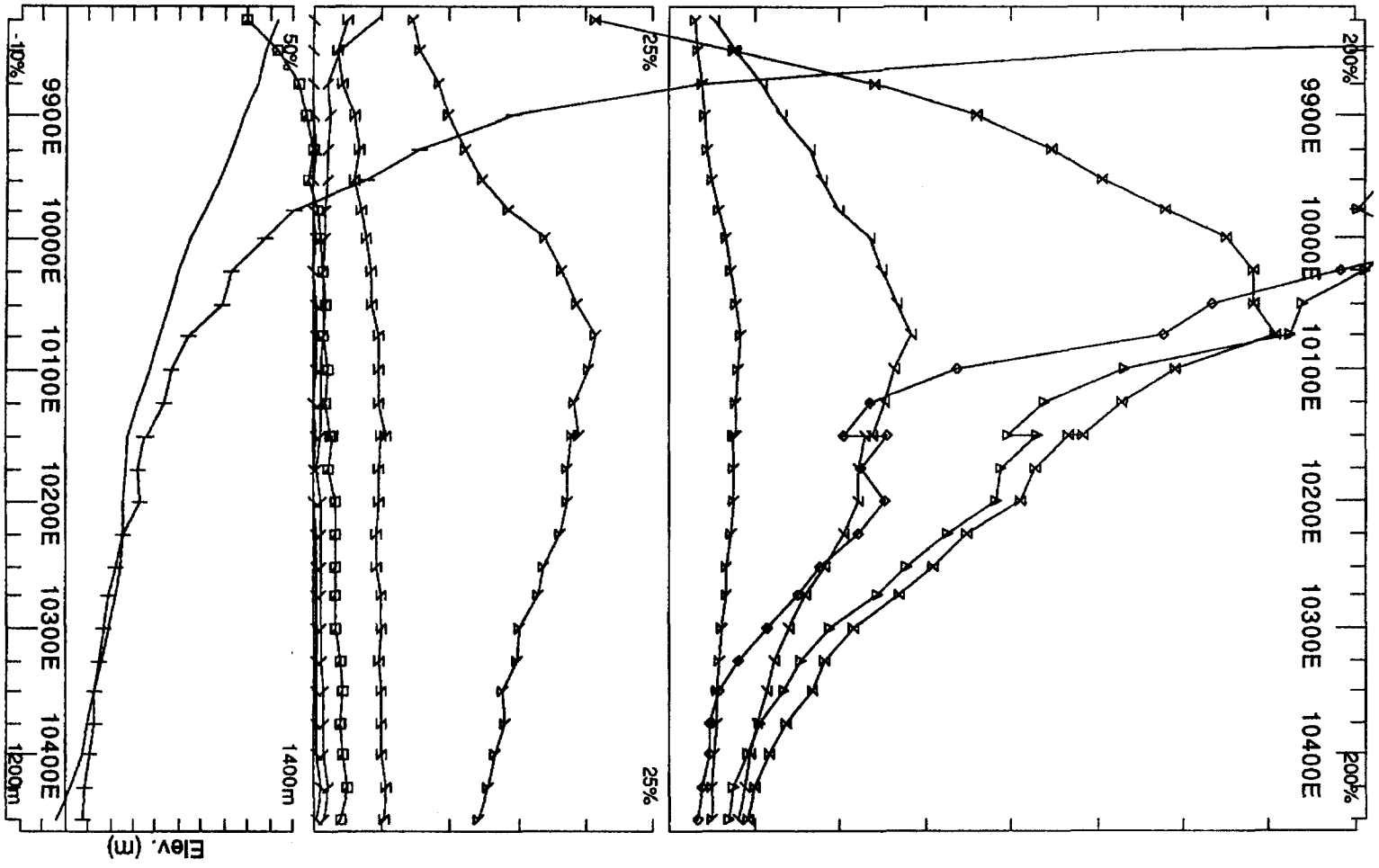
Loop: 2 Line: 11200N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 8/12/97



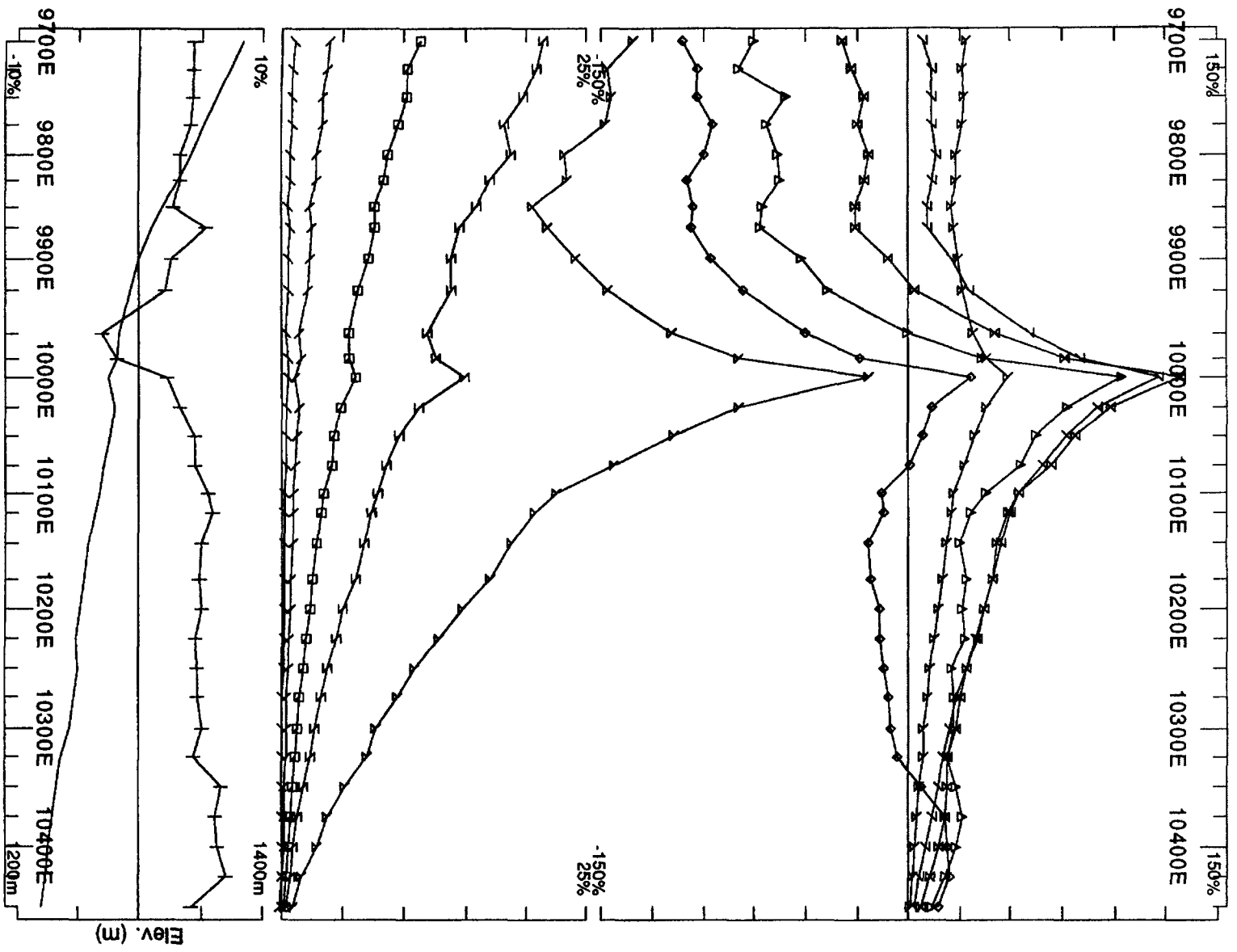
Loop: 2 Line: 11300N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/9 Reduced : 28/7/9 Plotted : 8/12/97



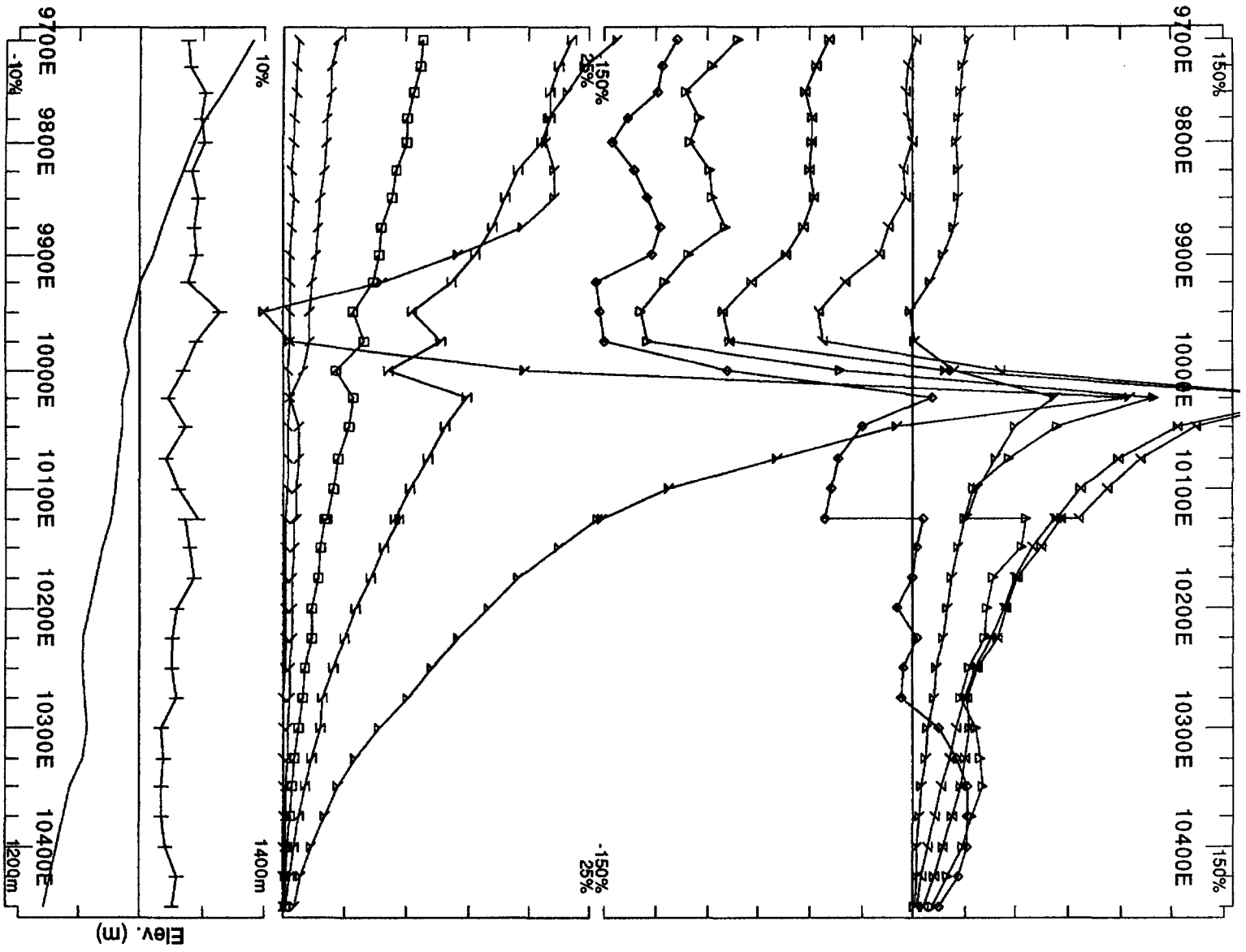
Loop: 2 Line: 11400N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 26/7/ Reduced : 28/7/9 Plotted : 8/12/97



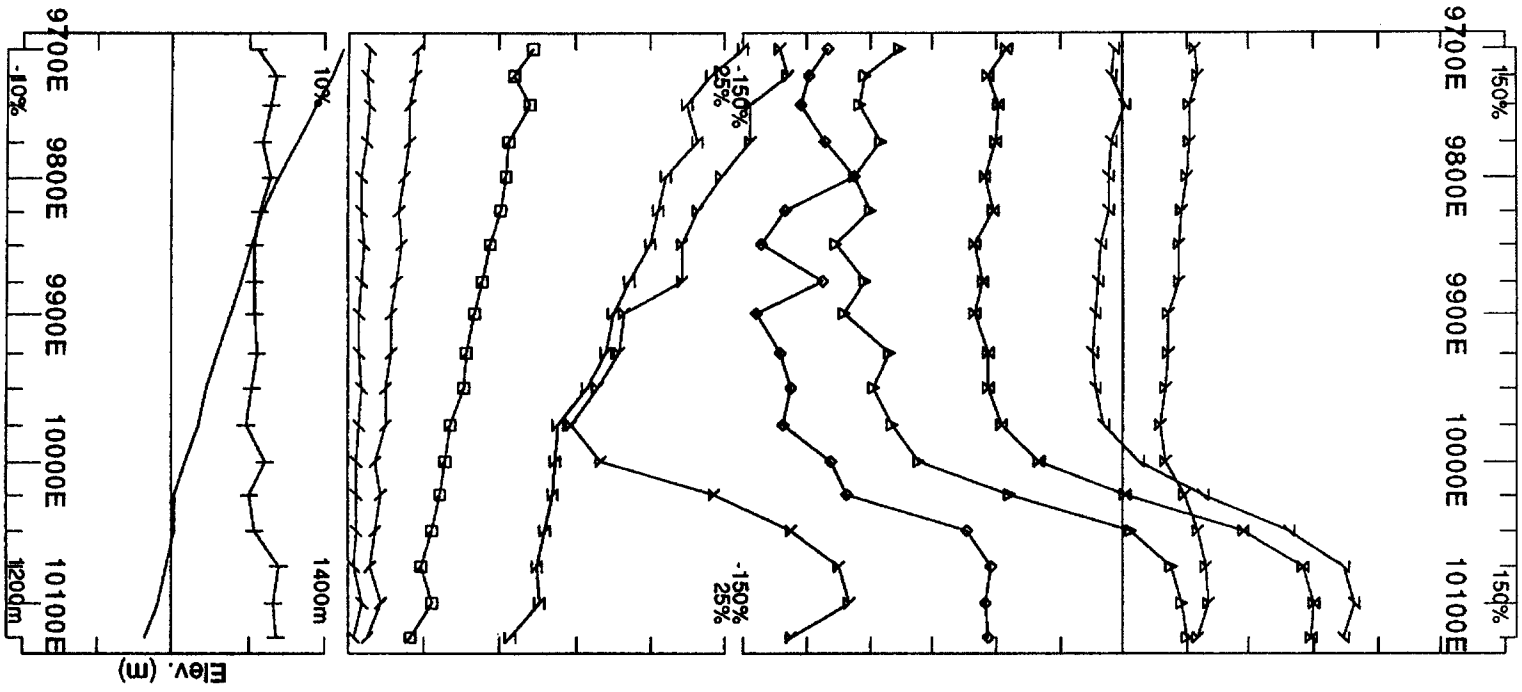
Loop: 2 Line: 11500N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Plotted : 8/12/97



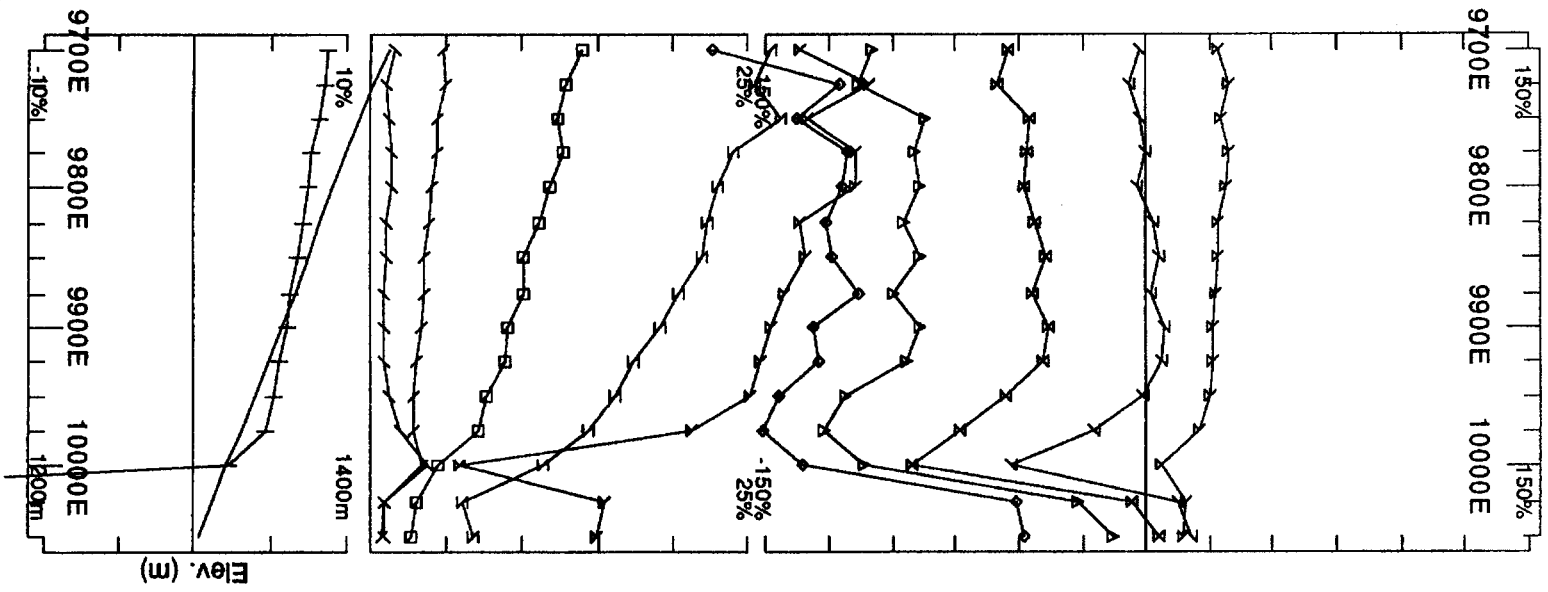
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11100N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 28/7/ Reduced : 28/7/ Plotted : 30/11/



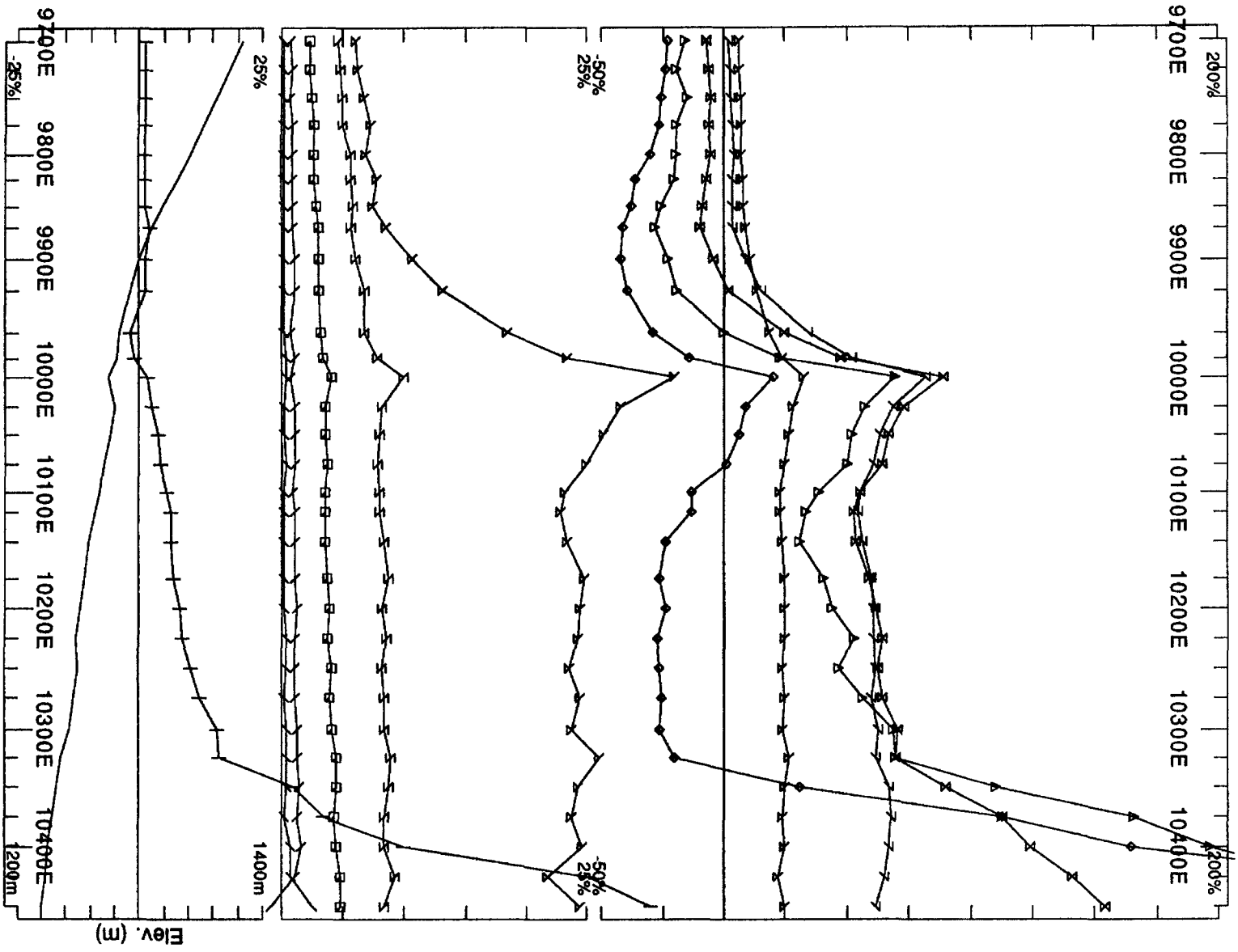
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11200N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	**SJ GEOPHYSICS LTD.** Job U9706 Plotted : 30/11/9



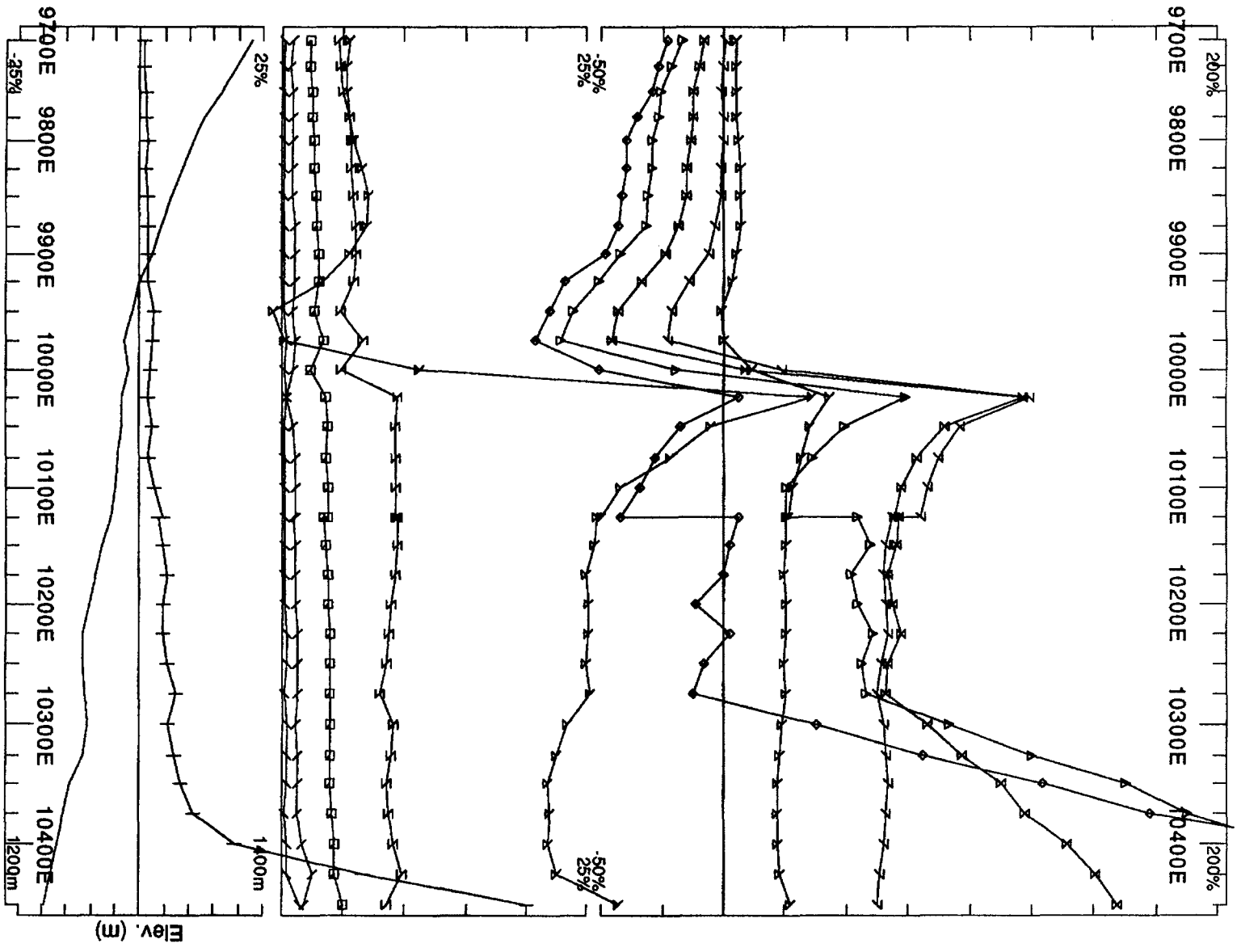
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11300N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 29/7/ Reduced : 29/7/9 Plotted : 30/11/9



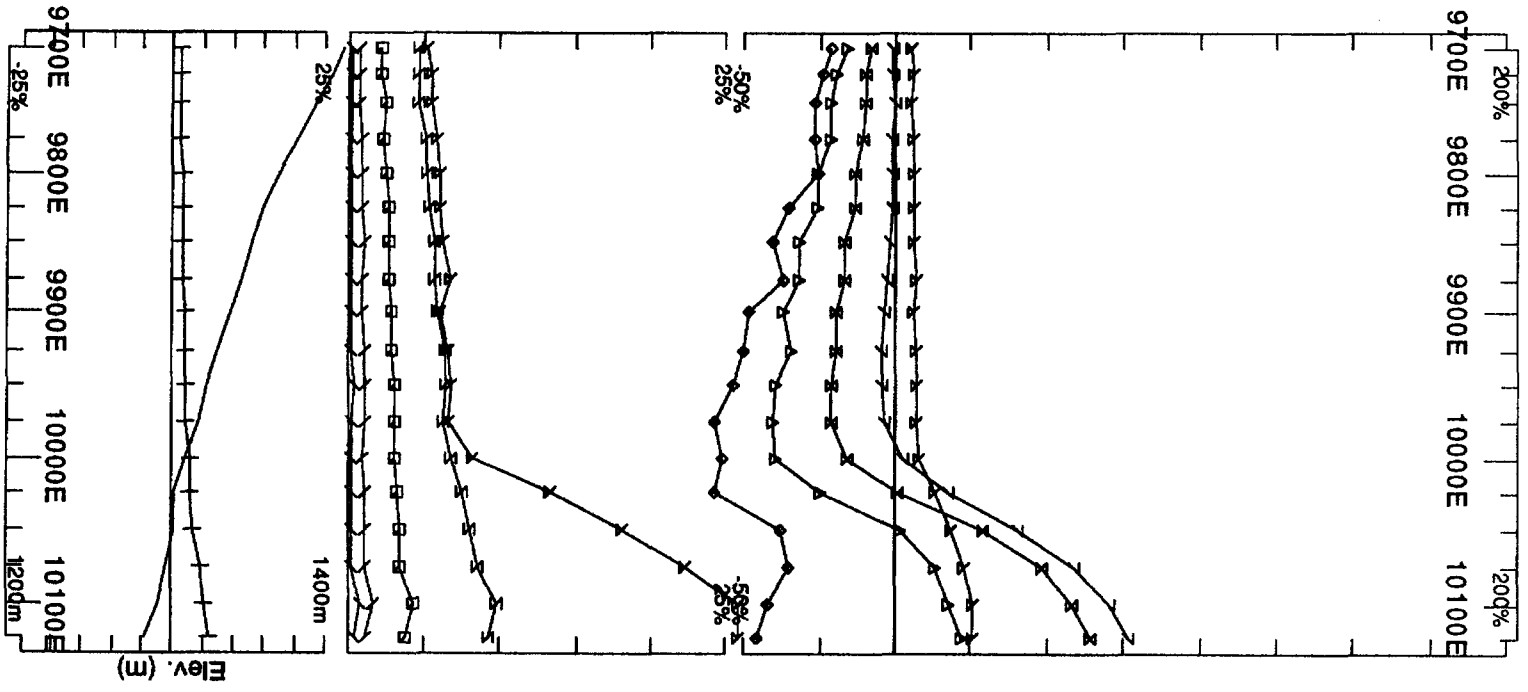
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11400N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hz	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 29/7/ Reduced : 29/7/ Plotted : 30/11/



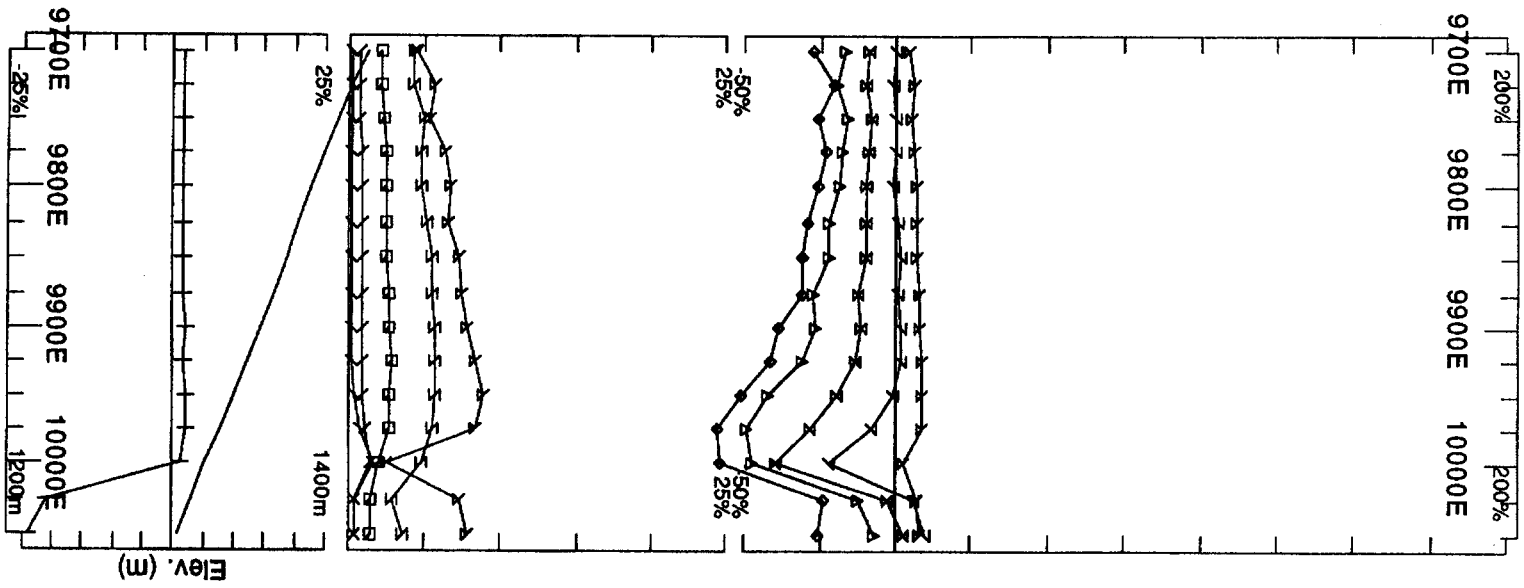
Loop: 3 Line: 11100N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 28/7/ Reduced : 28/7/ Plotted : 1/12/97



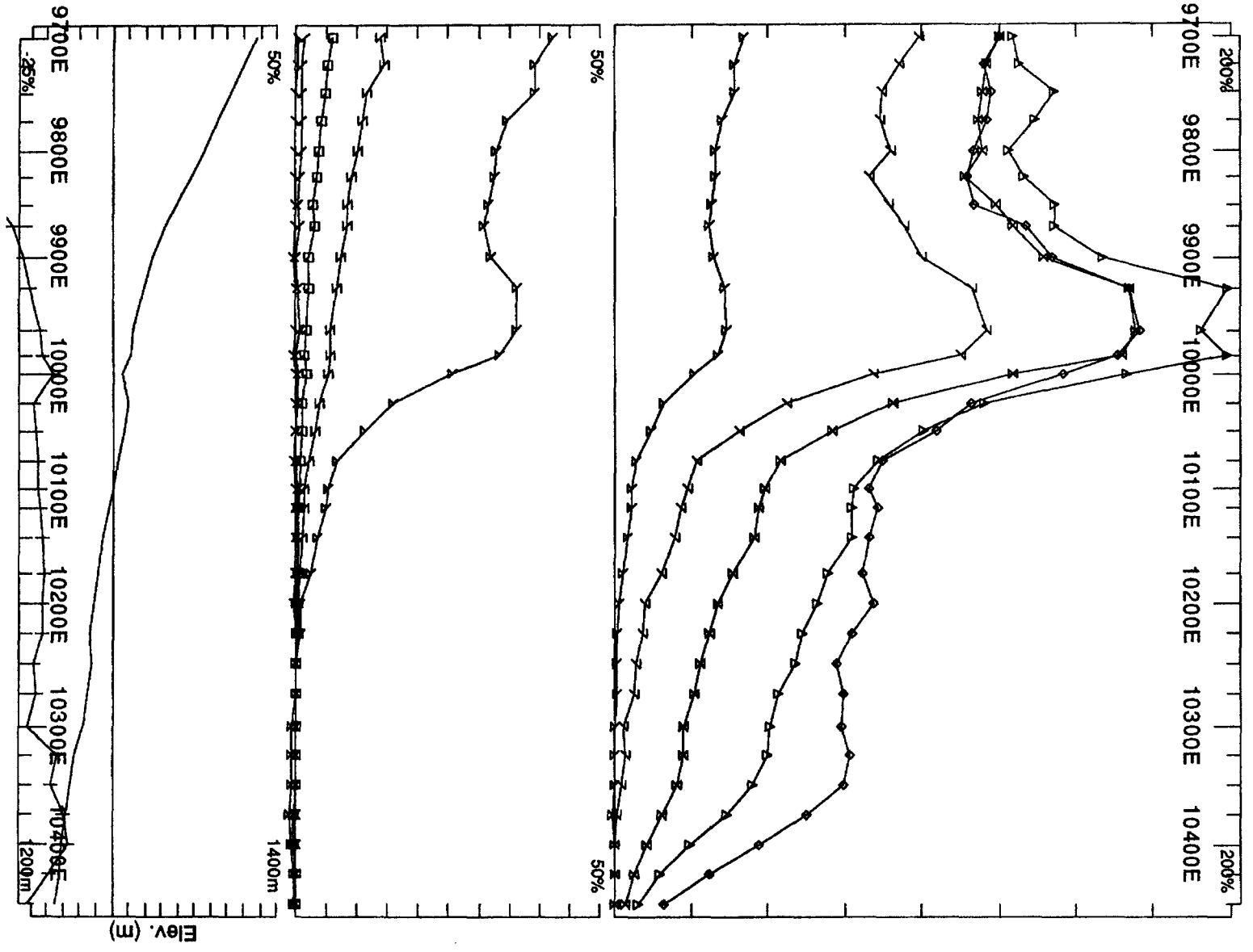
Loop: 3 Line: 11200N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 1/12/97



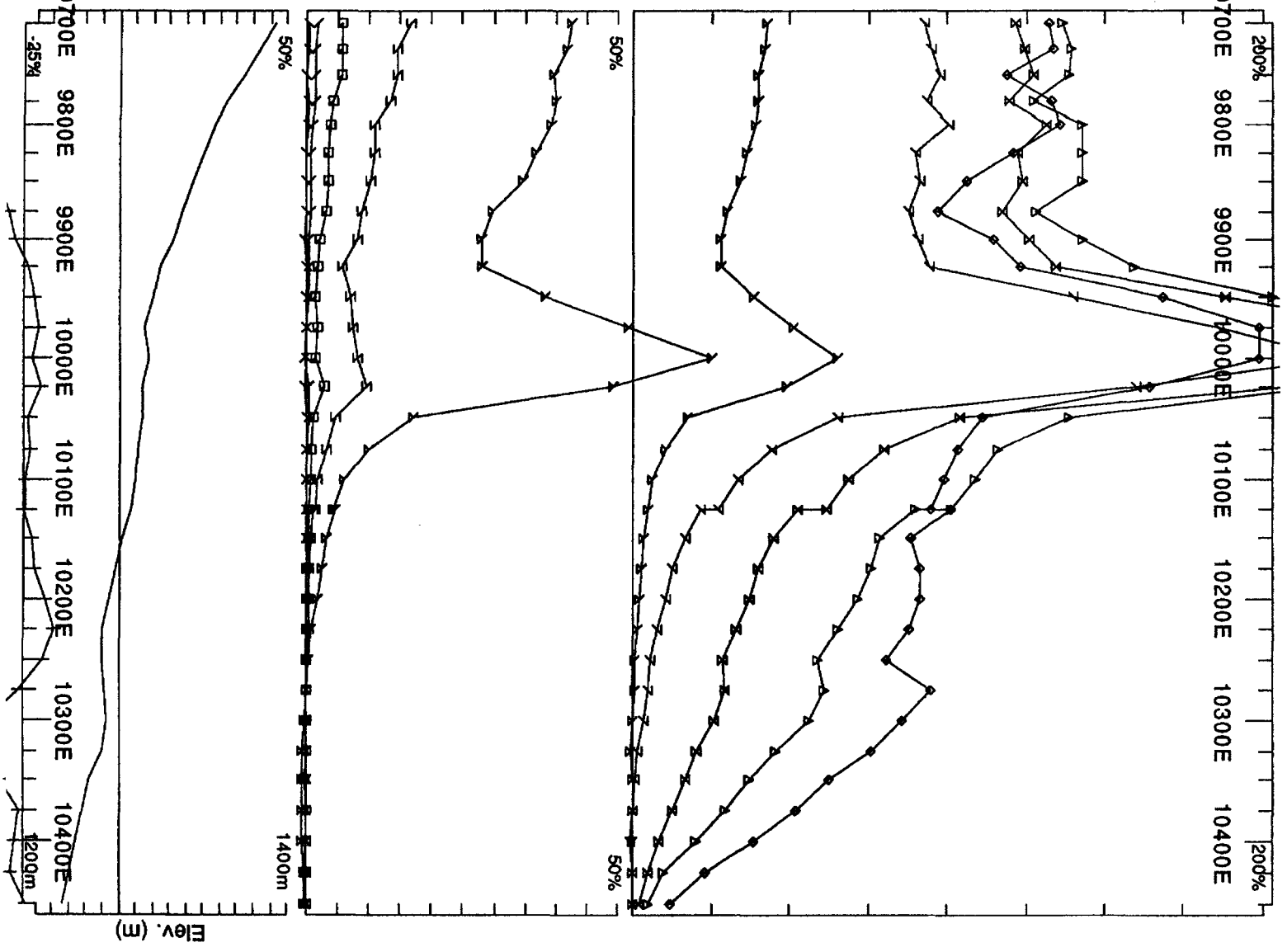
Loop: 3 Line: 11300N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Surveyed : 29/7/9 Reduced : 29/7/9 Plotted : 1/12/97



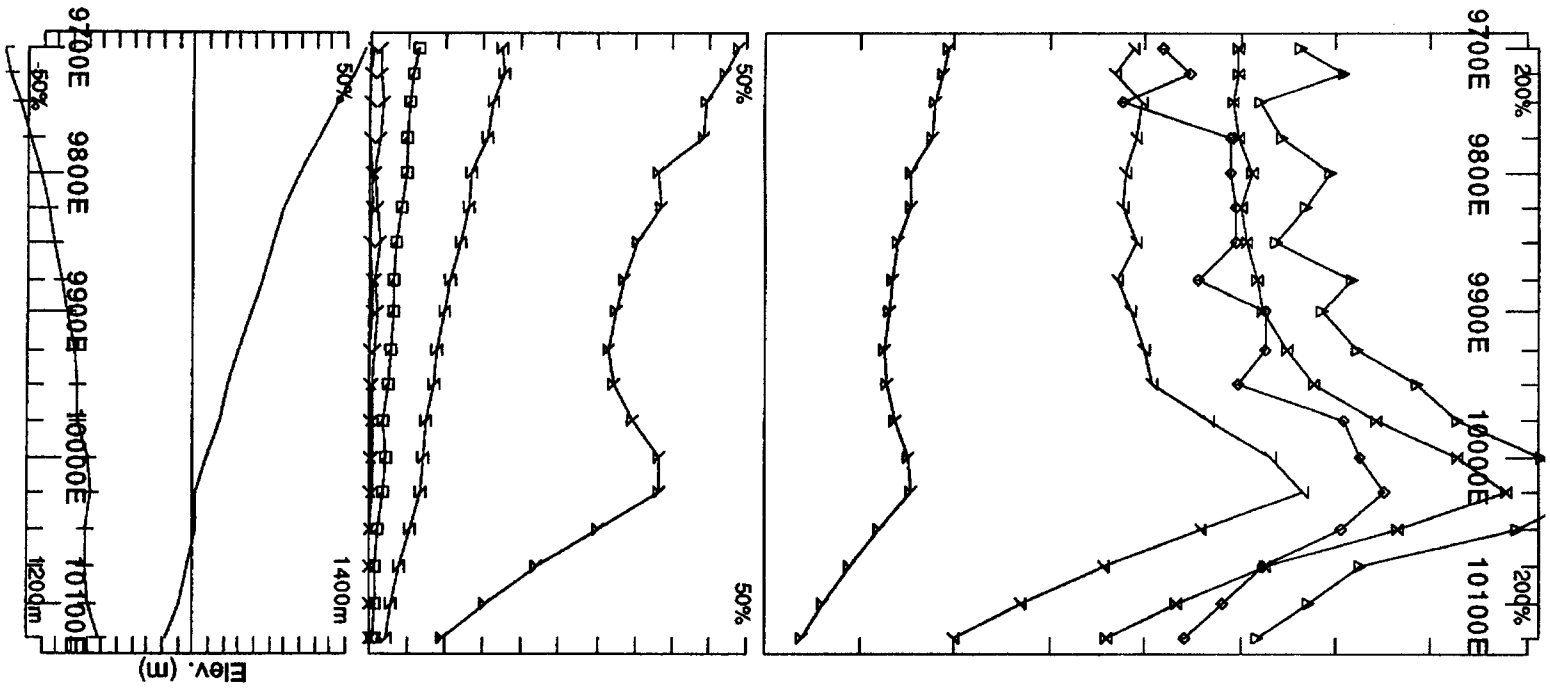
Loop: 3 Line: 11400N Compt: Hz	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 29/7/9 Reduced : 29/7/9 Plotted : 1/12/97



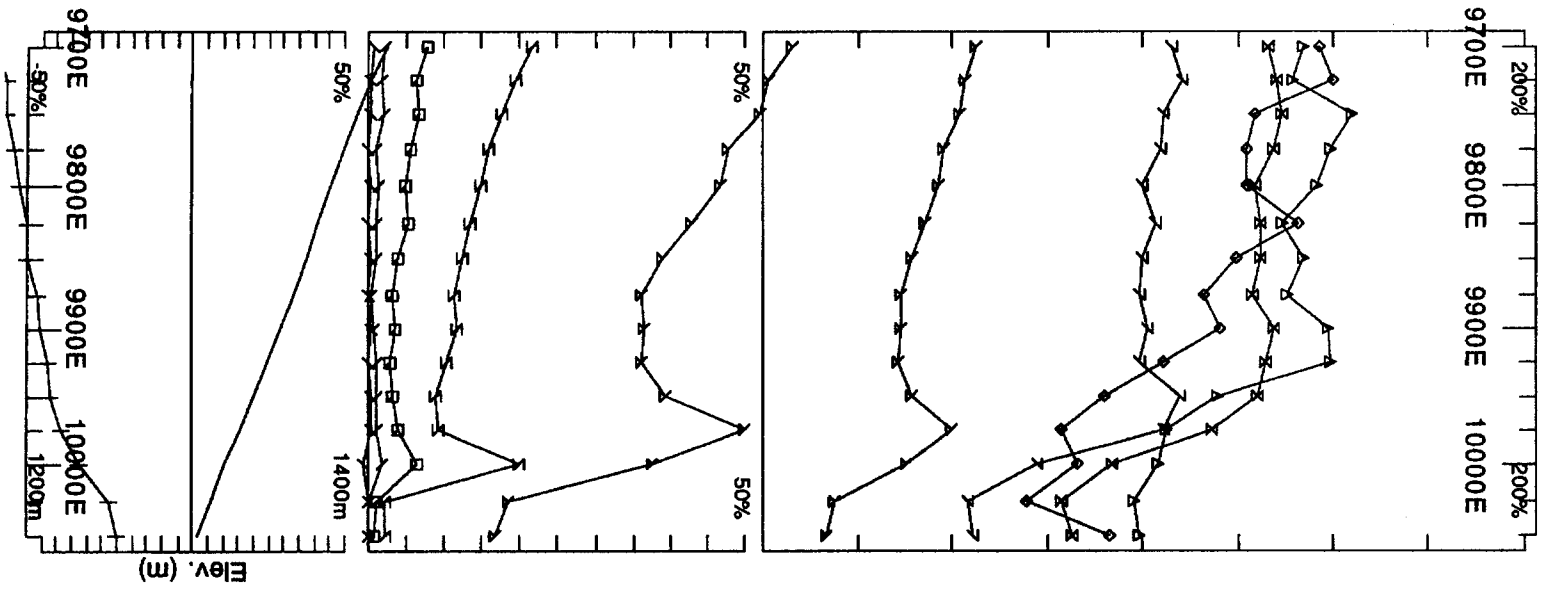
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11100N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 28/7/ Reduced : 28/7/ Plotted : 8/12/97



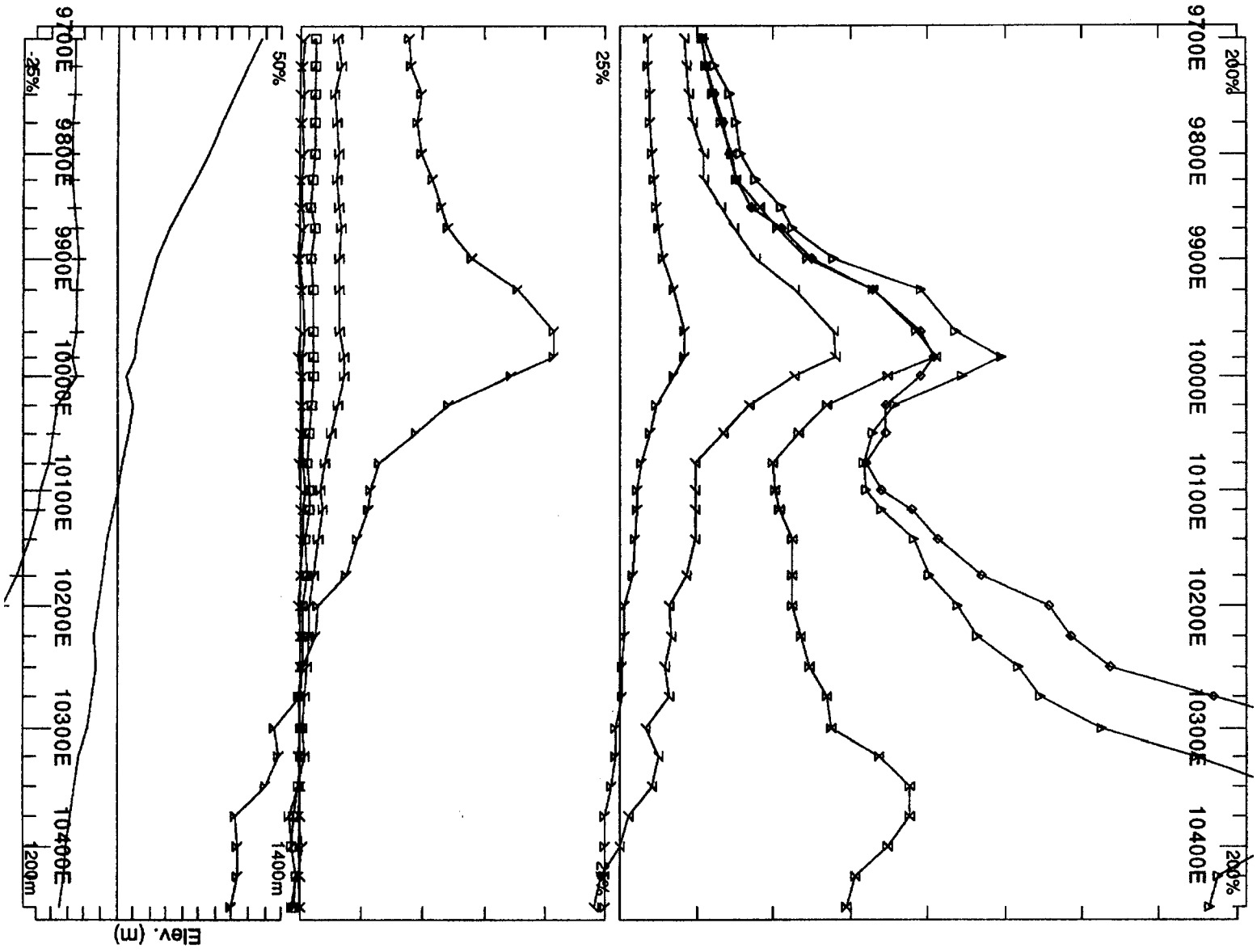
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11200N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Plotted : 8/12/97



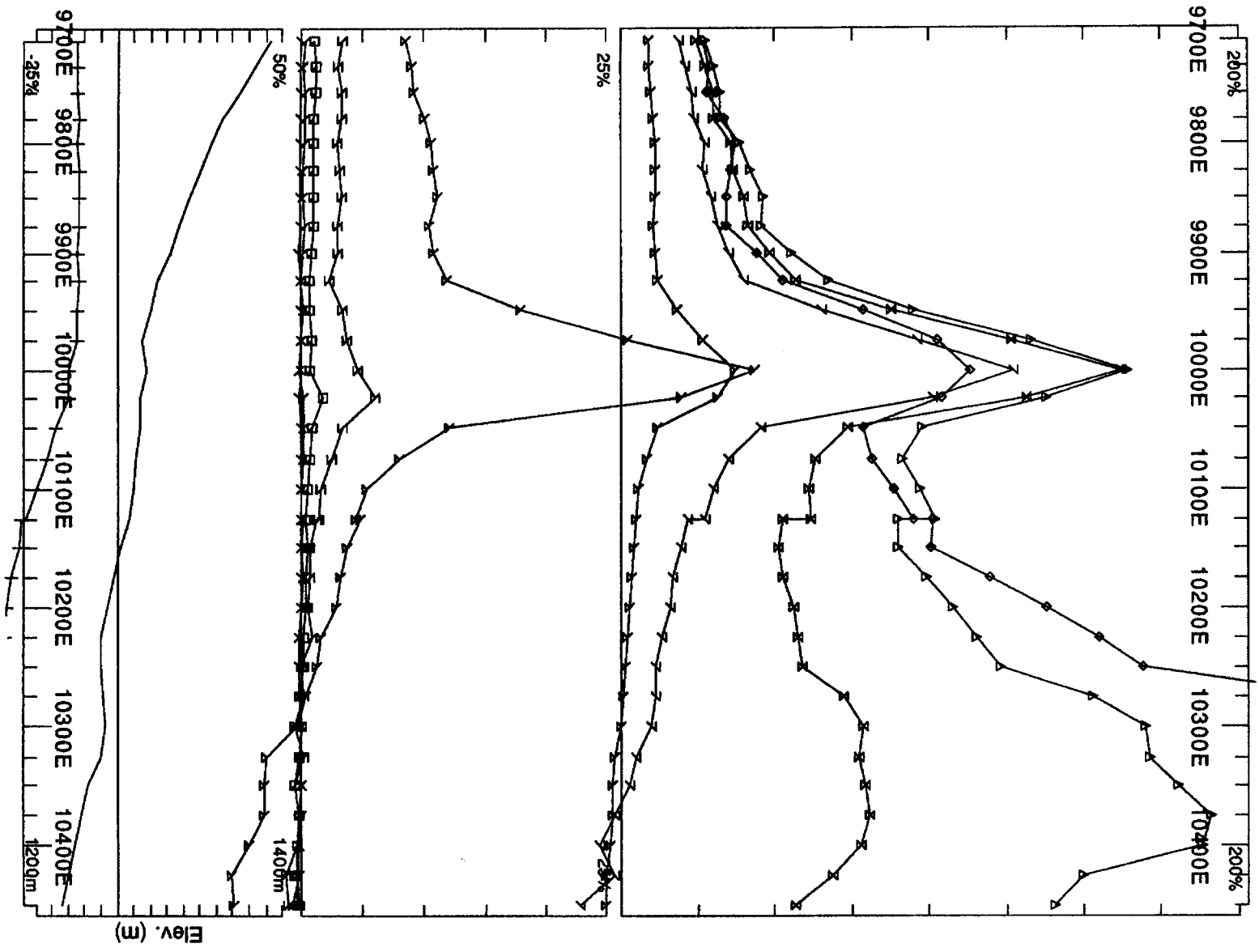
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11300N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 29/7/ Reduced : 29/7/ Plotted : 8/12/97



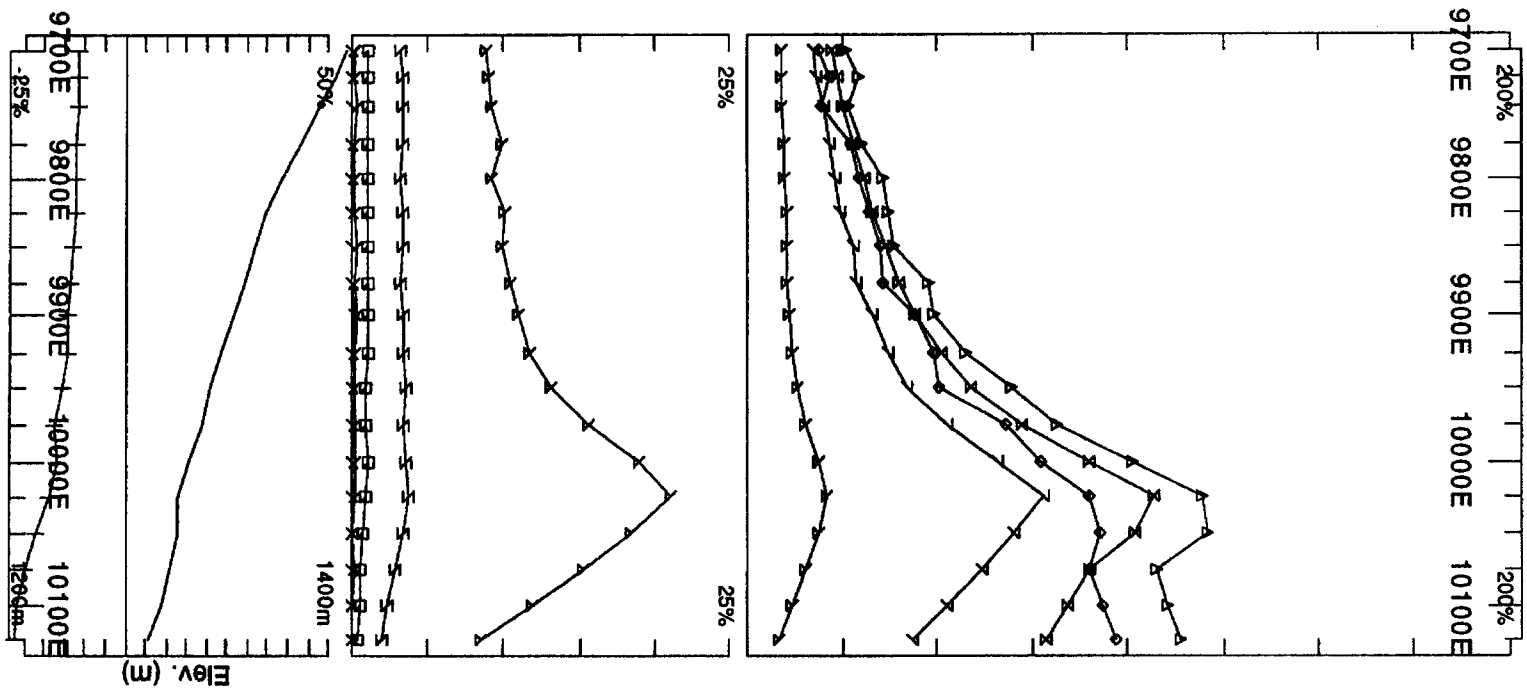
Loop: 3	Secondary, (Chn - Ch1)/|Hp|	UTEM Survey at: ICE PROPERTY
Line: 11400N	Contin. Norm at depth of 0 m	For: EXPATRIATE RESOURCES LTD.
Compt: Hx	Base Freq. 30.974 Hz	SJ GEOPHYSICS LTD. Job U9706 Surveyed : 29/7/ Reduced : 29/7/ Plotted : 8/12/97



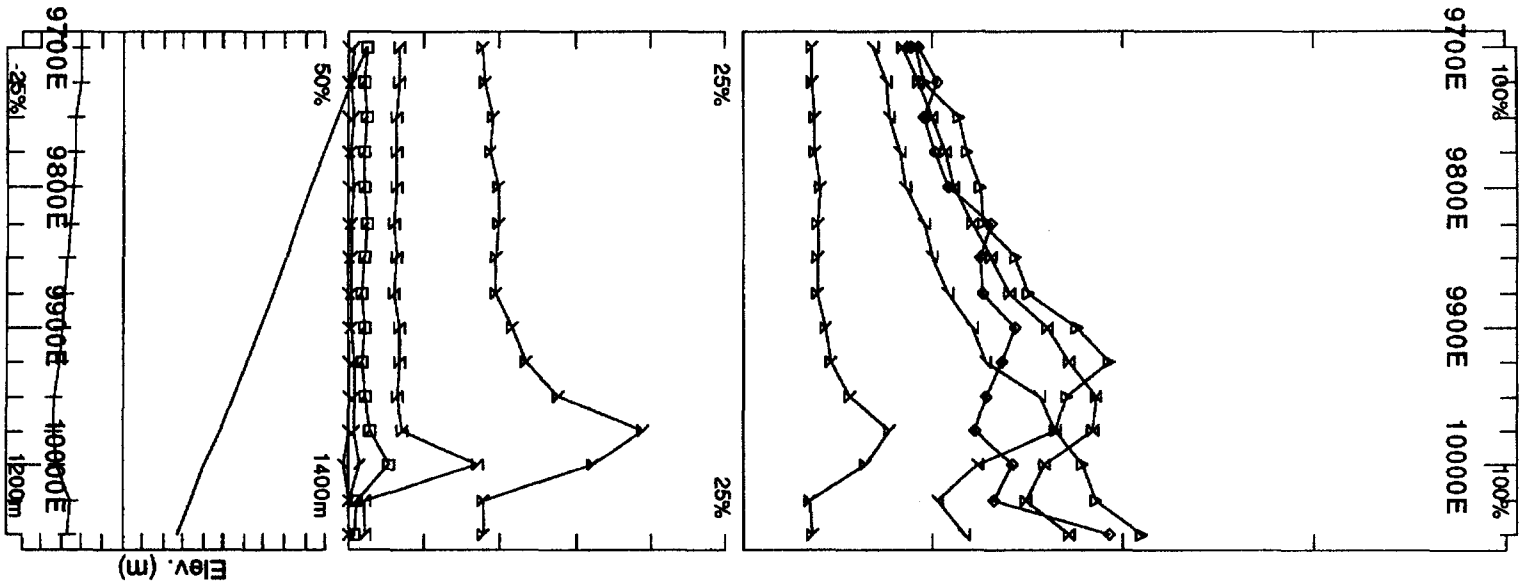
Loop: 3 Line: 11100N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. SJ GEOPHYSICS LTD. Job U9706 Surveyed : 28/7/ Reduced : 28/7/ Plotted : 8/12/97



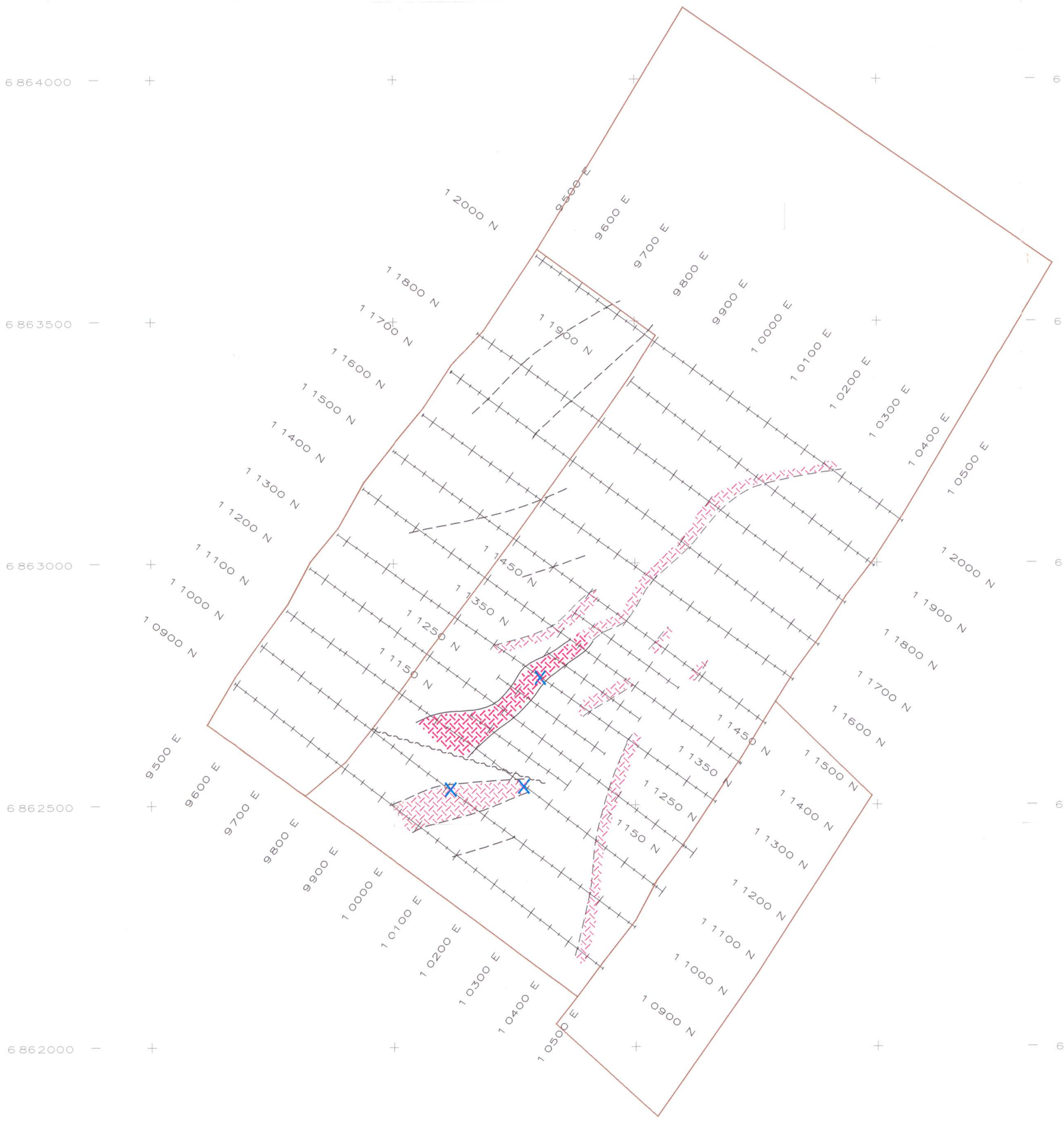
Loop: 3 Line: 11200N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Plotted : 8/12/97



Loop: 3 Line: 11300N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Surveyed : 29/7/ Reduced : 29/7/ Plotted : 8/12/97



Loop: 3 Line: 11400N Compt: Hx	Secondary, (Chn - Ch1)/|Hp| Point Norm.at x,y,z (376908,6862693,1274) Base Freq. 30.974 Hz	UTEM Survey at: ICE PROPERTY For: EXPATRIATE RESOURCES LTD. **SJ GEOPHYSICS LTD.** Job U9706 Surveyed : 29/7/ Reduced : 29/7/ Plotted : 8/12/97



LEGEND

- Current Channeling Anomaly
- Weak Conductor
- Very Weak Conductor
- Contact
- Fault
- Loops

EXPATRIATE RESOURCES LTD.

ICE PROPERTY

UTEM–3
COMPILATION MAP

N.T.S. 105G/14W Finlayson Lake/Pelly River Area

Scale in Meters

1 00 0 1 00 200 300

Nov. 1997 Plate G1

SJ Geophysics Ltd.

093869 3/5 Dwh (1)

APPENDIX IV

GPS SURVEY DATA

Ice Property

GPS Survey Coordinates

Data Quality: Standard = The surveyed positions were recorded in 3D mode and were differentially corrected. The reported UTM coordinates are within 1 to 5 meters of their actual locations; Poor = >25% of the surveyed positions were recorded in 2D mode; Uncorrected = The surveyed positions were not differentially corrected; N/S = No survey data available.

Base Station: W = Westmin Resources Limited base station at Wolverine Lake; WL = Ministry of Environment, Lands and Parks base station at Williams Lake; DL = Ministry of Environment, Lands and Parks base station at Dease Lake; RR = Department of Renewable Resources (Forestry) at Whitehorse.

A. Grid Station Points

	Grid Coordinates		UTM Coordinates				
Claim	Northing	Easting	Northing	Easting	Data Quality	Base Station	Date
Ice	10+000 N	10+000 E	6861736	376020	Standard	W	07-Jul-96
	10+100 N	9+500 E	6862116	375668	Standard	RR	25-May-97
		9+150 E	6862357	375384	Standard	RR	25-May-97
	10+200 N	9+150 E	6862400	375446	Standard	RR	25-May-97
		9+500 E	6862202	375728	Standard	RR	25-May-97
		10+100E	6861850	376209	Standard	RR	13-May-97
	10+300 N	9+150 N	6862468	375509	Standard	RR	25-May-97
		9+500 N	6862271	375791	Standard	RR	25-May-97
	10+400 N	9+150 E	6862544	375578	Poor	RR	25-May-97
		9+500 E	6862360	375861	Standard	RR	25-May-97
		10+000 E	6862058	376254	Standard	W	07-Jul-96
	10+600 N	9+500 E	6862514	376007	Standard	RR	25-May-97
		9+150 E	6862747	375766	Poor	RR	25-May-97
	10+900 N	10+500 E	6862162	376927	Standard	RR	05-Jun-97
		11+000 E	6861864	377281	Standard	RR	05-Jun-97
	11+000 N	10+950 E	6862046	377368	Poor	RR	05-Jun-97
	11+100 N	10+500 E	6862334	377055	Standard	RR	06-Jun-97
		10+850 E	6862144	377336	Poor	RR	06-Jun-97
	11+200 N	9+500 E	6862981	376355	Standard	RR	31-May-97
		10+500 E	6862414	377115	Standard	RR	06-Jun-97
		10+900 E	6862227	377451	Standard	RR	06-Jun-97
	11+300 N	9+500 E	6863062	376397	Standard	RR	31-May-97
	11+400 N	9+000 E	6863393	376140	Standard	RR	29-May-97
		9+500 E	6863063	376396	Poor	RR	31-May-97
	11+500 N	9+500 E	6863224	376518	Standard	RR	31-May-97

Claim	Grid Coordinates Northing	Easting	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
	11+600 N	9+000 E	6863557	376250	Standard	RR	29-May-97
		9+500 E	6863279	376612	Standard	RR	31-May-97
	11+700 N	9+500 E	6863390	376625	Standard	RR	31-May-97
	11+800 N	9+000 E	6863711	376361	Standard	RR	29-May-97
		9+500 E	6863471	376693	Standard	RR	31-May-97
	12+000 N	9+000 E	6863862	376472	Standard	RR	29-May-97
		9+425 E	6863618	376819	Standard	RR	01-Jun-97
		10+500 E	6863077	377589	Standard	RR	01-Jun-97
	12+200 N	9+000 E	6864016	376581	Standard	RR	29-May-97
	12+400 N	9+000 E	6864181	376702	Standard	RR	29-May-97

B. Expatriate Resources Ltd. Claim Posts

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	1, 2 / 17, 18	-	6862609	375914	Poor	WL	31-May-96
	3, 4	1, 2	6862974	376140	Standard	WL	31-May-96
	5, 6	3, 4	6863357	376347	Standard	RR	15-May-97
	7, 8	5, 6	6863734	376557	Standard	WL	31-May-96
	-	7, 8	6864111	376783	Standard	WL	31-May-96
Ice	9, 10 / 27, 28	-	6862250	376410	Standard	RR	15-May-97
	11, 12	9, 10	6862599	376653	Standard	WL	31-May-96
	13, 14	11, 12	6862931	376898	Poor	WL	31-May-96
	15, 16	13, 14	6863260	377102	Standard	WL	31-May-96
	-	15, 16	6863637	377322	Standard	WL	31-May-96
Ice	17, 18 / 1, 2	-	68662601	375904	Uncorrected	-	13-May-97
	19, 20	17, 18	6862262	375730	Standard	RR	15-May-97
	21, 22	19, 20	6861874	375534	Standard	RR	15-May-97
	23, 24	21, 22	6861486	375342	Standard	RR	15-May-97
	25, 26	23, 24	6861090	375142	Standard	RR	15-May-97
	55, 56	25, 26	6860908	374680	Uncorrected	-	13-May-97
Ice	27, 28 / 9, 10	-	6862250	376410	Standard	RR	15-May-97
	29, 30	27, 28	6861888	376240	Standard	RR	25-Oct-96
	31, 32	29, 30	6861510	376047	Standard	RR	25-Oct-96
	33, 34	31, 32	6861140	375847	Standard	RR	25-Oct-96
	35, 36	33, 34	6860745	375648	Standard	RR	25-Oct-96
	53, 54	35, 36	6860355	375454	Standard	RR	13-May-97
Ice	37, 38 / 85, 86	-	6863335	377868	Standard	RR	22-Oct-96
	39, 40	37, 38	6862940	377670	Standard	RR	25-Oct-96
	41, 42	39, 40	6862536	377472	Standard	RR	25-Oct-96
	43, 44	41, 42	6862139	377248	Standard	RR	25-Oct-96
	45, 46	43, 44	6861759	377034	Standard	RR	25-Oct-96
	47, 48	45, 46	6861345	376869	Uncorrected	-	13-May-97
	49, 50	47, 48	6860981	376627	Standard	RR	24-Oct-96
	51, 52	49, 50	6860598	376399	Standard	RR	24-Oct-96

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	-	51, 52	6860195	376223	Standard	RR	24-Oct-96
Ice	53, 54	35, 36	6860355	375454	Standard	RR	24-Oct-96
	-	53, 54	6859968	375219	Standard	RR	14-May-97
Ice	55, 56	25, 26	6860908	374680	Uncorrected	-	13-May-97
	-	55, 56	6860451	374456	Standard	RR	14-May-97
Ice	57, 58	-	6864118	376783	Standard	RR	17-Oct-96
	59, 60	57, 58	6864496	376979	Standard	RR	17-Oct-96
	61, 62	59, 60	6864857	377180	Standard	RR	17-Oct-96
	63, 64	61, 62	6865250	377391	Standard	RR	17-Oct-96
	65, 66	63, 64	6865646	377604	Standard	RR	17-Oct-96
	67, 68	65, 66	6866028	377809	Standard	RR	17-Oct-96
	69, 70	67, 68	6866396	377987	Standard	RR	17-Oct-96
	-	69, 70	6866748	378226	Standard	RR	17-Oct-96
Ice	71, 72	15, 16	6863639	377324	Standard	RR	17-Oct-96
	73, 74	71, 72	6863985	377551	Standard	RR	17-Oct-96
	75, 76	73, 74	6864409	377777	Standard	RR	17-Oct-96
	77, 78	75, 76	6864761	378017	Standard	RR	17-Oct-96
	79, 80	77, 78	6864985	378198	Standard	RR	17-Oct-96
	81, 82	79, 80	6865299	378410	Standard	RR	17-Oct-96
	83, 84	81, 82	6865654	378664	Standard	RR	17-Oct-96
	-	83, 84	6865850	378780	Standard	RR	17-Oct-96
Ice	85, 86	37, 38	6863335	377868	Standard	RR	17-Oct-96
	87, 88	85, 86	-	-	NS	-	-
	89, 90	87, 88	6864073	378305	Standard	RR	17-Oct-96
	91, 92	89, 90	6864444	378528	Standard	RR	17-Oct-96
	93, 94	91, 92	6864778	378717	Standard	RR	17-Oct-96
	95, 96	93, 94	6865287	379082	Standard	RR	17-Oct-96
	97, 98	95, 96	6865663	379296	Standard	RR	17-Oct-96
	-	97, 98	6866059	379488	Standard	RR	17-Oct-96
Ice	99, 100	-	6859658	376817	Standard	RR	23-Oct-96
	101, 102	99, 100	6860196	377193	Standard	RR	23-Oct-96
	103, 104	101, 102	6860970	377749	Standard	RR	23-Oct-96
	105, 106	103, 104	6861333	377998	Standard	RR	23-Oct-96
	107, 108	105, 106	6861658	378233	Uncorrected	-	23-Oct-96
	109, 110	107, 108	6862075	378473	Standard	RR	23-Oct-96
	111, 112	109, 110	6862713	378837	Uncorrected	-	23-Oct-96
	113, 114	111, 112	6863036	379057	Standard	RR	23-Oct-96
	115, 116	113, 114	6863400	379280	Standard	RR	23-Oct-96
	117, 118	115, 116	6863724	379509	Standard	RR	23-Oct-96
	119, 120	117, 118	6864101	379737	Standard	RR	24-Oct-96
	121, 122	119, 120	6864467	379964	Standard	RR	24-Oct-96
	123, 124	121, 122	6864827	380192	Standard	RR	24-Oct-96
	-	123, 124	6865185	380408	Standard	RR	24-Oct-96
Ice	125, 126	-	6859929	377860	Standard	RR	23-Oct-96
	127, 128	125, 126	6860221	378152	Standard	RR	23-Oct-96
	129, 130	127, 128	6860513	378446	Standard	RR	23-Oct-96
	131, 132	129, 130	6860977	378789	Standard	RR	23-Oct-96
	133, 134	131, 132	6861339	379071	Standard	RR	23-Oct-96
	135, 136	133, 134	6861739	379320	Standard	RR	23-Oct-96
	137, 138	135, 136	6862112	379580	Standard	RR	23-Oct-96

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	139, 140	137, 138	6862404	379789	Standard	RR	23-Oct-96
	-	139, 140	6862699	380015	Standard	RR	23-Oct-96
Ice	141, 142	-	6859482	378734	Standard	RR	23-Oct-96
	143, 144	141, 142	6859848	378969	Standard	RR	19-Aug-97
	145, 146	143, 144	6860222	379207	Standard	RR	19-Aug-97
	147, 148	145, 146	6860611	379440	Standard	RR	19-Aug-97
	149, 150	147, 148	6860986	379678	Standard	RR	19-Aug-97
	151, 152	149, 150	6861396	379908	Standard	RR	19-Aug-97
	153, 154	151, 152	6861795	380152	Standard	RR	24-Oct-96
	155, 156	153, 154	6862233	380421	Standard	RR	24-Oct-96
	389, 390	155, 156	6862597	380656	Standard	RR	24-Oct-96
Ice	157, 158	-	6857986	379487	Standard	RR	23-Oct-96
	159, 160	157, 158	6858281	379747	Uncorrected	-	23-Oct-96
	161, 162	159, 160	6858710	379950	Standard	RR	23-Oct-96
	163, 164	161, 162	6859057	380172	Standard	RR	23-Oct-96
	899, 900	163, 164	6859414	380404	Standard	RR	23-Oct-96
Ice	165, 166	-	6859323	376574	Standard	RR	24-Oct-96
	167, 168	165, 166	6859045	376980	Standard	RR	24-Oct-96
	169, 170	167, 168	6858785	377363	Standard	RR	24-Oct-96
	171, 172	169, 170	6858562	377726	Standard	RR	24-Oct-96
	173, 174	171, 172	6858287	378125	Standard	RR	24-Oct-96
	175, 176	173, 174	6858021	378512	Standard	RR	24-Oct-96
	177, 178	175, 176	6857798	378889	Standard	RR	24-Oct-96
	179, 180	177, 178	6857587	379242	Standard	RR	24-Oct-96
	-	179, 180	6857349	379605	Standard	RR	24-Oct-96
Ice	181, 182	-	6860923	373877	Standard	RR	21-Oct-96
	183, 184	181, 182	6861259	374125	Standard	RR	21-Oct-96
	185, 186	183, 184	6861558	374363	Standard	RR	21-Oct-96
	187, 188	185, 186	6861905	374560	Standard	RR	21-Oct-96
	189, 190	187, 188	6862317	374766	Standard	RR	21-Oct-96
	191, 192	189, 190	6862694	374968	Standard	RR	21-Oct-96
	193, 194	191, 192	6863105	375139	Standard	RR	21-Oct-96
	195, 196	193, 194	6863402	375384	Standard	RR	21-Oct-96
	197, 198	195, 196	6863805	375569	Standard	RR	21-Oct-96
	199, 200	197, 198	6864148	375774	Standard	RR	21-Oct-96
	201, 202	199, 200	-	-	NS	-	-
	203, 204	201, 202	6864866	376197	Standard	RR	21-Oct-96
	205, 206	203, 204	6865247	376452	Standard	RR	21-Oct-96
	207, 208	205, 206	6865620	376670	Standard	RR	21-Oct-96
	209, 210	207, 208	6865992	376894	Standard	RR	21-Oct-96
	211, 212	209, 210	-	-	NS	-	-
	-	211, 212	6866695	377352	Standard	RR	21-Oct-96
Ice	213, 214	-	6861796	373377	Standard	RR	21-Oct-96
	215, 216	213, 214	6862071	373527	Standard	RR	21-Oct-96
	217, 218	215, 216	6862843	373950	Standard	RR	21-Oct-96
	219, 220	217, 218	6863254	374189	Standard	RR	21-Oct-96
	221, 222	219, 220	6863627	374394	Standard	RR	21-Oct-96
	223, 224	221, 222	6863977	374580	Standard	RR	21-Oct-96
	225, 226	223, 224	6864321	374782	Standard	RR	21-Oct-96
	227, 228	225, 226	6864721	375004	Standard	RR	21-Oct-96
	229, 230	227, 228	6865110	375247	Standard	RR	21-Oct-96
	231, 232	229, 230	6865426	375432	Standard	RR	21-Oct-96

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	233, 234	231, 232	6865792	375691	Standard	RR	21-Oct-96
	235, 236	233, 234	6866175	375912	Standard	RR	21-Oct-96
	-	235, 236	6866546	376168	Standard	RR	21-Oct-96
Ice	237, 238	-	6862105	372133	Standard	RR	21-Oct-96
	239, 240	237, 238	6862490	372369	Standard	RR	21-Oct-96
	241, 242	239, 240	6862926	372689	Standard	RR	21-Oct-96
	243, 244	241, 242	6863313	372933	Standard	RR	21-Oct-96
	245, 246	243, 244	6863700	373164	Standard	RR	21-Oct-96
	247, 248	245, 246	6864037	373372	Standard	RR	21-Oct-96
	249, 250	247, 248	6864424	373596	Standard	RR	21-Oct-96
	251, 252	249, 250	6864736	373837	Standard	RR	21-Oct-96
	253, 254	251, 252	6865068	374102	Standard	RR	21-Oct-96
	255, 256	253, 254	6865407	374352	Standard	RR	21-Oct-96
	257, 258	255, 256	6865824	374635	Standard	RR	21-Oct-96
	259, 260	257, 258	6866117	374807	Standard	RR	21-Oct-96
	-	259, 260	6866473	375006	Standard	RR	21-Oct-96
Ice	261, 262	-	6862278	371459	Standard	RR	20-Oct-96
	263, 264	261, 262	6862633	371611	Standard	RR	20-Oct-96
	265, 266	263, 264	6863005	371811	Standard	RR	20-Oct-96
	267, 268	265, 266	6863406	371936	Standard	RR	20-Oct-96
	269, 270	267, 268	6863720	372130	Standard	RR	20-Oct-96
	271, 272	269, 270	6864098	372344	Standard	RR	20-Oct-96
	273, 274	271, 272	6864478	372562	Standard	RR	20-Oct-96
	275, 276	273, 274	6864846	372804	Standard	RR	20-Oct-96
	277, 278	275, 276	6865226	373035	Standard	RR	20-Oct-96
	279, 280	277, 278	6865627	373274	Standard	RR	20-Oct-96
	281, 282	279, 280	6866002	373501	Standard	RR	20-Oct-96
	283, 284	281, 282	6866406	373748	Standard	RR	20-Oct-96
	285, 286	283, 284	6866805	373993	Standard	RR	20-Oct-96
	-	285, 286	6867172	374307	Standard	RR	20-Oct-96
Ice	287, 288	-	6863291	370791	Standard	RR	20-Oct-96
	289, 290	287, 288	6863645	371010	Standard	RR	20-Oct-96
	291, 292	289, 290	6863882	371223	Standard	RR	20-Oct-96
	293, 294	291, 292	6864138	371365	Standard	RR	20-Oct-96
	295, 296	293, 294	6864582	371625	Standard	RR	20-Oct-96
	297, 298	295, 296	6864951	371870	Standard	RR	20-Oct-96
	299, 300	297, 298	6865317	372092	Standard	RR	20-Oct-96
	301, 302	299, 300	6865707	372308	Standard	RR	20-Oct-96
	303, 304	301, 302	6866081	372538	Standard	RR	20-Oct-96
	305, 306	303, 304	6866461	372785	Standard	RR	20-Oct-96
	307, 308	305, 306	6866824	373043	Standard	RR	20-Oct-96
	309, 310	307, 308	6867200	373275	Standard	RR	20-Oct-96
	-	309, 310	6867541	373492	Standard	RR	20-Oct-96
Ice	311, 312 / 335, 336	-	6866515	371825	Standard	W	31-Jul-96
	313, 314	311, 312	6866878	372048	Standard	W	31-Jul-96
	315, 316	313, 314	6867239	372293	Standard	W	31-Jul-96
	317, 318	315, 316	6867615	372530	Standard	W	31-Jul-96
	-	317, 318	6867992	372784	Standard	W	31-Jul-96
Ice	319, 320 / 349, 350	-	6867008	371109	Standard	RR	19-Oct-96
	321, 322	319, 320	6867406	371338	Standard	RR	19-Oct-96
	323, 324	321, 322	6867745	371561	Standard	RR	19-Oct-96
	325, 326	323, 324	6868088	371776	Standard	RR	19-Oct-96

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	-	325, 326	6868505	372028	Standard	RR	19-Oct-96
Ice	327, 328 / 363, 364	-	6867508	370372	Standard	RR	19-Oct-96
	329, 330	327, 328	6867852	370608	Standard	RR	19-Oct-96
	331, 332	329, 330	6868236	370821	Standard	RR	19-Oct-96
	333, 334	331, 332	6868582	371041	Standard	RR	19-Oct-96
	-	333, 334	6868961	371278	Standard	RR	19-Oct-96
Ice	335, 336 / 311, 312	-	6868003	372776	Standard	RR	19-Oct-96
	337, 338	335, 336	6866164	371601	Standard	RR	19-Oct-96
	339, 340	337, 338	6865823	371376	Standard	RR	19-Oct-96
	341, 342	339, 340	6865486	371145	Standard	RR	19-Oct-96
	343, 344	341, 342	6865134	370929	Standard	RR	19-Oct-96
	345, 346	343, 344	6864789	370699	Standard	RR	19-Oct-96
	347, 348	345, 346	6864448	370475	Standard	RR	19-Oct-96
	-	347, 348	6864207	370313	Standard	RR	19-Oct-96
Ice	349, 350 / 319, 320	-	6867008	371109	Standard	RR	19-Oct-96
	351, 352	349, 350	6866631	370987	Standard	RR	19-Oct-96
	353, 354	351, 352	6866254	370813	Standard	RR	19-Oct-96
	355, 356	353, 354	6865924	370629	Standard	RR	19-Oct-96
	357, 358	355, 356	6865582	370416	Standard	RR	19-Oct-96
	359, 360	357, 358	6865216	370210	Standard	RR	19-Oct-96
	361, 362	359, 360	6864851	370000	Standard	RR	19-Oct-96
	-	361, 362	6864488	369800	Standard	RR	19-Oct-96
Ice	363, 364 / 328, 329	-	6867508	370372	Standard	RR	19-Oct-96
	365, 366	363, 364	6867104	370240	Standard	RR	19-Oct-96
	367, 368	365, 366	6866773	370026	Standard	RR	19-Oct-96
	369, 370	367, 368	6866428	369826	Standard	RR	19-Oct-96
	371, 372	369, 370	6866059	369614	Standard	RR	19-Oct-96
	373, 374	371, 372	6865695	369403	Standard	RR	19-Oct-96
	-	373, 374	6865409	369239	Standard	RR	19-Oct-96
Ice	375, 376	-	6862892	379678	Standard	RR	23-Oct-96
	377, 378	375, 376	6863250	379876	Standard	RR	23-Oct-96
	379, 380	377, 378	6863602	380063	Standard	RR	23-Oct-96
	381, 382	379, 380	6863981	380250	Standard	RR	23-Oct-96
	383, 384	381, 382	6864332	380442	Standard	RR	24-Oct-96
	385, 386	383, 384	6864689	380643	Standard	RR	24-Oct-96
	387, 388	385, 386	6865046	380844	Standard	RR	24-Oct-96
	-	387, 388	6865402	381038	Standard	RR	24-Oct-96
Ice	389, 390	155, 156	6862597	380656	Standard	RR	24-Oct-96
	391, 392	389, 390	6862957	380862	Standard	RR	24-Oct-96
	393, 394	391, 392	6863314	381057	Standard	RR	24-Oct-96
	395, 396	393, 394	6863668	381267	Standard	RR	24-Oct-96
	397, 398	395, 396	6864028	381469	Standard	RR	24-Oct-96
	399, 400	397, 398	6864383	381667	Standard	RR	24-Oct-96
	401, 402	399, 400	6864777	381894	Standard	RR	24-Oct-96
	-	401, 402	6865115	382064	Standard	RR	24-Oct-96
Ice	403, 404	-	6853569	389114	Standard	RR	07-Aug-97
	405, 406	403, 404	6853639	388912	Standard	RR	07-Aug-97
	407, 408	405, 406	6853806	388537	Standard	RR	07-Aug-97
	409, 410	407, 408	6853956	388129	Standard	RR	07-Aug-97
	411, 412	409, 410	6854090	387739	Standard	RR	07-Aug-97

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	413, 414	411, 412	6854232	387312	Standard	RR	07-Aug-97
	415, 416	413, 414	6854351	386950	Standard	RR	07-Aug-97
	417, 418	415, 416	6854503	386546	Standard	RR	07-Aug-97
	419, 420	417, 418	6854637	386166	Standard	RR	06-Aug-97
	421, 422	419, 420	6854805	385733	Standard	RR	06-Aug-97
	423, 424	421, 422	6854934	385368	Standard	RR	06-Aug-97
	425, 426	423, 424	6855081	384985	Standard	RR	06-Aug-97
	427, 428	425, 426	6855219	384612	Standard	RR	06-Aug-97
	429, 430	427, 428	-	-	N/S		
	431, 432	429, 430	6855515	383850	Standard	RR	06-Aug-97
	433, 434	431, 432	6855655	383445	Standard	RR	05-Aug-97
	435, 436	433, 434	6855808	383074	Standard	RR	05-Aug-97
	437, 438	435, 436	6855967	382679	Standard	RR	05-Aug-97
	439, 440	437, 438	6856147	382292	Standard	RR	05-Aug-97
	441, 442	439, 440	-	-	N/S		
	443, 444	441, 442	6856465	381554	Standard	RR	05-Aug-97
	445, 446	443, 444	6856640	381183	Standard	RR	05-Aug-97
	447, 448	445, 446	6856711	381033	Standard	RR	05-Aug-97
	449, 450	447, 448	6856930	380634	Standard	RR	04-Aug-97
	451, 452	449, 450	6857048	380329	Standard	RR	04-Aug-97
	453, 454	451, 452	6857192	379945	Standard	RR	04-Aug-97
	-	453, 454	6857349	379605	Standard	RR	04-Aug-97
Ice	455, 456	-	6854797	390561	Standard	RR	03-Jun-97
	457, 458	455, 456	6854931	390161	Standard	RR	03-Jun-97
	459, 460	457, 458	6855059	389725	Standard	RR	04-Jun-97
	461, 462	459, 460	6855184	389312	Standard	RR	04-Jun-97
	463, 464	461, 462	6855314	388895	Standard	RR	04-Jun-97
	465, 466	463, 464	-	-	N/S		
	467, 468	465, 466	6855585	388084	Standard	RR	04-Jun-97
	469, 470	467, 468	6855706	387679	Standard	RR	04-Jun-97
	471, 472	469, 470	6855816	387276	Standard	RR	04-Jun-97
	473, 474	471, 472	6855938	386811	Standard	RR	04-Jun-97
	475, 476	473, 474	6856050	386371	Standard	RR	04-Jun-97
	477, 478	475, 476	6856172	386001	Standard	RR	04-Jun-97
	479, 480	477, 478	6856280	385617	Standard	RR	04-Jun-97
	481, 482	479, 480	6856406	385192	Standard	RR	04-Jun-97
	483, 484	481, 482	6856538	384775	Standard	RR	04-Jun-97
	485, 486	483, 484	6856713	384335	Standard	RR	04-Jun-97
	487, 488	485, 486	6856858	383936	Standard	RR	01-Jun-97
	489, 490	487, 488	6857003	383538	Standard	RR	01-Jun-97
	491, 492	489, 490	6857132	383148	Standard	RR	01-Jun-97
	493, 494	491, 492	6857248	382759	Standard	RR	01-Jun-97
	495, 496	493, 494	6857379	382331	Standard	RR	01-Jun-97
	497, 498	495, 496	6857513	381948	Standard	RR	31-May-97
	499, 500	497, 498	6857636	381533	Standard	RR	31-May-97
	501, 502	499, 500	6857747	381133	Standard	RR	31-May-97
	503, 504	501, 502	6857858	380739	Standard	RR	31-May-97
	505, 506	503, 504	6857965	380348	Standard	RR	31-May-97
	-	505, 506	6858035	379962	Standard	RR	31-May-97
Ice	507, 508	-	6855245	390147	Standard	RR	05-Jun-97
	509, 510	507, 508	6855352	390008	Standard	RR	05-Jun-97
	511, 512	509, 510	6855481	389594	Standard	RR	05-Jun-97
	513, 514	511, 512	6855652	389225	Standard	RR	05-Jun-97
	515, 516	513, 514	6855812	388833	Standard	RR	05-Jun-97
	517, 518	515, 516	6855910	388439	Standard	RR	05-Jun-97

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	519, 520	517, 518	6856057	388041	Standard	RR	05-Jun-97
	521, 522	519, 520	6856179	387623	Standard	RR	05-Jun-97
	523, 524	521, 522	6856318	387207	Standard	RR	05-Jun-97
	525, 526	523, 524	6856404	386793	Standard	RR	05-Jun-97
	527, 528	525, 526	6856549	386395	Standard	RR	05-Jun-97
	529, 530	527, 528	6856700	386002	Standard	RR	05-Jun-97
	531, 532	529, 530	6856817	385594	Standard	RR	05-Jun-97
	533, 534	531, 532	6856977	385226	Standard	RR	01-Jun-97
	535, 536	533, 534	6857128	384828	Standard	RR	01-Jun-97
	537, 538	535, 536	6857292	384435	Standard	RR	01-Jun-97
	539, 540	537, 538	6857431	384061	Standard	RR	01-Jun-97
	541, 542	539, 540	6857574	383645	Standard	RR	01-Jun-97
	543, 544	541, 542	6857733	383247	Standard	RR	01-Jun-97
	545, 546	543, 544	6857883	382853	Standard	RR	31-May-97
	547, 548	545, 546	6858034	382480	Standard	RR	31-May-97
	549, 550	547, 548	6858192	382074	Standard	RR	31-May-97
	551, 552	549, 550	6858329	381722	Standard	RR	31-May-97
	553, 554	551, 552	6858480	381353	Standard	RR	31-May-97
	555, 556	553, 554	6858662	380983	Standard	RR	31-May-97
	-	555, 556	6858758	380590	Standard	RR	31-May-97
Ice	557, 558	-	6856118	390655	Standard	RR	03-Jun-97
	559, 560	557, 558	6856244	390321	Standard	RR	03-Jun-97
	561, 562	559, 560	6856376	389925	Standard	RR	04-Jun-97
	563, 564	561, 562	6856509	389544	Standard	RR	04-Jun-97
	565, 566	563, 564	6856624	389150	Standard	RR	05-Jun-97
	567, 568	565, 566	6856776	388744	Standard	RR	05-Jun-97
	569, 570	567, 568	6856928	388349	Standard	RR	05-Jun-97
	571, 572	569, 570	6857058	387942	Standard	RR	05-Jun-97
	573, 574	571, 572	6857206	387546	Standard	RR	05-Jun-97
	575, 576	573, 574	6857343	387142	Standard	RR	05-Jun-97
	577, 578	575, 576	6857471	386765	Standard	RR	05-Jun-97
	579, 580	577, 578	6857594	386366	Standard	RR	05-Jun-97
	581, 582	579, 580	6857734	385967	Standard	RR	04-Jun-97
	583, 584	581, 582	6857877	385565	Standard	RR	30-May-97
	585, 586	583, 584	6858010	385166	Standard	RR	30-May-97
	587, 588	585, 586	6858135	384776	Standard	RR	30-May-97
	589, 590	587, 588	6858276	384387	Standard	RR	30-May-97
	591, 592	589, 590	6858391	383993	Standard	RR	30-May-97
	593, 594	591, 592	6858510	383654	Standard	RR	30-May-97
	595, 596	593, 594	6858652	383234	Standard	RR	29-May-97
	597, 598	595, 596	6858783	382820	Standard	RR	29-May-97
	599, 600	597, 598	6858881	382432	Standard	RR	29-May-97
	601, 602	599, 600	6859038	382047	Standard	RR	29-May-97
	603, 604	601, 602	6859189	381669	Standard	RR	29-May-97
	605, 606	603, 604	6859328	381308	Standard	RR	29-May-97
	-	605, 606	-	-	N/S		
Ice	607, 608	-	-	-	N/S		
	609, 610	607, 608	-	-	N/S		
	611, 612	609, 610	6857625	390396	Standard	RR	05-Jun-97
	613, 614	611, 612	6857766	390025	Standard	RR	05-Jun-97
	615, 616	613, 614	6857856	389556	Standard	RR	04-Jun-97
	617, 618	615, 616	6857980	389154	Standard	RR	04-Jun-97
	619, 620	617, 618	6858100	388752	Standard	RR	04-Jun-97
	621, 622	619, 620	6858200	388343	Standard	RR	04-Jun-97
	623, 624	621, 622	6858305	387931	Standard	RR	04-Jun-97

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	625, 626	623, 624	6858421	387523	Standard	RR	04-Jun-97
	627, 628	625, 626	6858537	387113	Standard	RR	04-Jun-97
	629, 630	627, 628	6858648	386710	Standard	RR	04-Jun-97
	631, 632	629, 630	6858770	386303	Standard	RR	04-Jun-97
	633, 634	631, 632	-	-	N/S		
	635, 636	633, 634	6858918	385485	Standard	RR	04-Jun-97
	637, 638	635, 636	6859011	385092	Standard	RR	04-Jun-97
	639, 640	637, 638	6859110	384680	Standard	RR	04-Jun-97
	641, 642	639, 640	6859249	384289	Standard	RR	04-Jun-97
	643, 644	641, 642	6859347	383893	Standard	RR	29-May-97
	645, 646	643, 644	-	-	N/S		
	647, 648	645, 646	6859564	383075	Standard	RR	29-May-97
	649, 650	647, 648	6859698	382709	Standard	RR	29-May-97
	651, 652	649, 650	6859830	382372	Standard	RR	29-May-97
	653, 654	651, 652	6859969	382024	Standard	RR	29-May-97
	655, 656	653, 654	6860100	381683	Standard	RR	29-May-97
	-	655, 656	-	-	N/S		
Ice	657, 658	-	-	-	N/S		
	659, 660	657, 658	6858932	386808	Standard	RR	01-Aug-97
	661, 662	659, 660	6859075	386440	Standard	RR	01-Aug-97
	663, 664	661, 662	6859240	386007	Standard	RR	01-Aug-97
	665, 666	663, 664	6859396	385626	Poor	RR	01-Aug-97
	667, 668	665, 666	6859556	385265	Standard	RR	01-Aug-97
	669, 670	667, 668	6859709	384873	Standard	RR	01-Aug-97
	671, 672	669, 670	6859885	384488	Standard	RR	01-Aug-97
	673, 674	671, 672	6860022	384130	Standard	RR	01-Aug-97
	675, 676	673, 674	6860202	383721	Standard	RR	02-Aug-97
	677, 678	675, 676	-	-	N/S		
	679, 680	677, 678	6860467	382946	Standard	RR	02-Aug-97
	681, 682	679, 680	6860599	382539	Standard	RR	02-Aug-97
	683, 684	681, 682	6860760	382147	Standard	RR	02-Aug-97
	685, 686	683, 684	6860873	381755	Standard	RR	02-Aug-97
	-	685, 686	6860943	381536	Standard	RR	03-Aug-97
Ice	687, 688	-	6860036	387965	Standard	RR	31-Jul-97
	689, 690	687, 688	6860159	387556	Standard	RR	31-Jul-97
	691, 692	689, 690	6860309	387155	Standard	RR	31-Jul-97
	693, 694	691, 692	6860455	386759	Standard	RR	31-Jul-97
	695, 696	693, 694	6860589	386351	Poor	RR	31-Jul-97
	697, 698	695, 696	6860714	385934	Standard	RR	31-Jul-97
	699, 700	697, 698	6860874	385496	Standard	RR	31-Jul-97
	701, 702	699, 700	6861003	385086	Standard	RR	31-Jul-97
	703, 704	701, 702	6861140	384663	Standard	RR	31-Jul-97
	705, 706	703, 704	6861287	384246	Standard	RR	31-Jul-97
	707, 708	705, 706	6861429	383828	Standard	RR	31-Jul-97
	709, 710	707, 708	6861571	383413	Standard	RR	30-Jul-97
	711, 712	709, 710	6861712	383001	Standard	RR	30-Jul-97
	713, 714	711, 712	6861846	382596	Standard	RR	30-Jul-97
	-	713, 714	6861981	382191	Standard	RR	30-Jul-97
Ice	715, 716	-	6861299	386341	Standard	RR	02-Aug-97
	717, 718	715, 716	6861426	385946	Standard	RR	02-Aug-97
	719, 720	717, 718	6861523	385651	Standard	RR	02-Aug-97
	721, 722	719, 720	6861698	385118	Standard	RR	02-Aug-97
	723, 724	721, 722	6861824	384752	Standard	RR	02-Aug-97
	725, 726	723, 724	6861953	384390	Standard	RR	02-Aug-97

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	727, 728	725, 726	6862095	384023	Poor	RR	01-Aug-97
	729, 730	727, 728	6862222	383666	Standard	RR	01-Aug-97
	731, 732	729, 730	6862353	383302	Standard	RR	01-Aug-97
	733, 734	731, 732	6862497	382926	Standard	RR	01-Aug-97
	735, 736	733, 734	6862627	382581	Standard	RR	01-Aug-97
	-	735, 736	6862780	382202	Standard	RR	01-Aug-97
Ice	737, 738	-	6862031	386485	Standard	RR	04-Aug-97
	739, 740	737, 738	6862155	386113	Standard	RR	04-Aug-97
	741, 742	739, 740	6862296	385744	Standard	RR	04-Aug-97
	743, 744	741, 742	6862433	385380	Standard	RR	04-Aug-97
	745, 746	743, 744	6862579	385020	Standard	RR	04-Aug-97
	747, 748	745, 746	6862703	384656	Standard	RR	03-Aug-97
	749, 750	747, 748	6862835	384283	Standard	RR	03-Aug-97
	751, 752	749, 750	6862977	383923	Standard	RR	03-Aug-97
	753, 754	751, 752	6863114	383573	Standard	RR	03-Aug-97
	755, 756	753, 754	6863251	383213	Standard	RR	03-Aug-97
	757, 758	755, 756	6863363	382944	Standard	RR	03-Aug-97
	-	757, 758	6863495	382561	Standard	RR	03-Aug-97
Ice	759, 760	-	6862814	386877	Standard	RR	04-Aug-97
	761, 762	759, 760	6862936	386470	Standard	RR	04-Aug-97
	763, 764	761, 762	6863069	386065	Standard	RR	04-Aug-97
	765, 766	763, 764	6863203	385657	Standard	RR	05-Aug-97
	777, 778	765, 766	6863318	385248	Standard	RR	05-Aug-97
Ice	767, 768	-	6867011	363693	Standard	RR	18-Aug-97
	769, 770	767, 768	6866887	364084	Standard	RR	18-Aug-97
	771, 772	769, 770	6866877	364498	Standard	RR	18-Aug-97
	773, 774	771, 772	6866785	364902	Standard	RR	18-Aug-97
	775, 776	773, 774	6866670	365307	Standard	RR	18-Aug-97
	915, 916	775, 776	6866545	365702	Standard	RR	18-Aug-97
Ice	777, 778	765, 766	6863318	385248	Standard	RR	05-Aug-97
	779, 780	777, 778	6863420	384843	Standard	RR	05-Aug-97
	781, 782	779, 780	6863543	384440	Standard	RR	05-Aug-97
	783, 784	781, 782	6863682	384031	Standard	RR	05-Aug-97
	785, 786	783, 784	6863799	383621	Standard	RR	05-Aug-97
	787, 788	785, 786	6863929	383229	Standard	RR	05-Aug-97
	789, 790	787, 788	6864051	382834	Standard	RR	05-Aug-97
	-	789, 790	6864184	382446	Poor	RR	05-Aug-97
Ice	791, 792	-	6867872	369838	Standard	RR	06-Jun-97
	793, 794	791, 792	6867544	369638	Standard	RR	06-Jun-97
	795, 796	793, 794	6867253	369462	Standard	RR	06-Jun-97
	797, 798	795, 796	6866935	369282	Standard	RR	06-Jun-97
	799, 800	797, 798	6866609	369087	Standard	RR	06-Jun-97
	801, 802	799, 800	6866297	368875	Standard	RR	06-Jun-97
	-	801, 802	6865959	368699	Standard	RR	06-Jun-97
Ice	803, 804	-	6870510	357051	Standard	RR	18-Oct-96
	805, 806	803, 804	6870379	357448	Standard	RR	18-Oct-96
	807, 808	805, 806	6870254	357874	Standard	RR	18-Oct-96
	809, 810	807, 808	6870144	358264	Standard	RR	18-Oct-96
	811, 812	809, 810	6870040	358663	Standard	RR	18-Oct-96
	813, 814	811, 812	6869885	359050	Standard	RR	18-Oct-96
	815, 816	813, 814	6869768	359406	Standard	RR	18-Oct-96

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	817, 818	815, 816	6869651	359785	Standard	RR	18-Oct-96
	819, 820	817, 818	6869529	360177	Standard	RR	18-Oct-96
	821, 822	819, 820	6869447	360584	Poor	RR	18-Oct-96
	823, 824	821, 822	6869367	360984	Poor	RR	18-Oct-96
	825, 826	823, 824	6869191	361363	Standard	RR	18-Oct-96
	827, 828	825, 826	6869142	361789	Standard	RR	18-Oct-96
	829, 830	827, 828	6869032	362198	Standard	RR	18-Oct-96
	831, 832	829, 830	6868931	362628	Standard	RR	18-Oct-96
	833, 834	831, 832	6868829	363036	Standard	RR	18-Oct-96
	835, 836	833, 834	6868753	363436	Standard	RR	18-Oct-96
	837, 838	835, 836	6868666	363811	Poor	RR	18-Oct-96
	839, 840	837, 838	6868554	364223	Standard	RR	06-Jun-97
	841, 842	839, 840	6868462	364616	Standard	RR	18-Oct-96
	843, 844	841, 842	6868364	365001	Standard	RR	19-Oct-96
	845, 846	843, 844	6868277	365373	Standard	RR	19-Oct-96
	847, 848	845, 846	6868184	365761	Standard	RR	19-Oct-96
	849, 850	847, 848	6868089	366147	Standard	RR	19-Oct-96
	851, 852	849, 850	6867993	366531	Standard	RR	19-Oct-96
	853, 854	851, 852	6867907	366934	Standard	RR	19-Oct-96
	-	853, 854	6867808	367347	Standard	RR	19-Oct-96
Ice	855, 856	-	6869121	358337	Standard	RR	29-May-97
	857, 858	855, 856	6869014	358698	Poor	RR	29-May-97
	859, 860	857, 858	6868869	359068	Standard	RR	29-May-97
	861, 862	859, 860	6868750	359453	Standard	RR	29-May-97
	863, 864	861, 862	-	-	N/S		
	865, 866	863, 864	-	-	N/S		
	867, 868	865, 866	-	-	N/S		
	869, 870	867, 868	-	-	N/S		
	871, 872	869, 870	-	-	N/S		
	873, 874	871, 872	-	-	N/S		
	875, 876	873, 874	-	-	N/S		
	877, 878	875, 876	-	-	N/S		
	879, 880	877, 878	-	-	N/S		
	881, 882	879, 880	-	-	N/S		
	883, 884	881, 882	6867655	364149	Poor	RR	06-Jun-97
	885, 886	883, 884	6867534	364554	Standard	RR	06-Jun-97
	887, 888	885, 886	6867420	364962	Standard	RR	06-Jun-97
	889, 890	887, 888	6867316	365382	Standard	RR	06-Jun-97
	891, 892	889, 890	6867239	365818	Standard	RR	06-Jun-97
	893, 894	891, 892	6867159	366215	Standard	RR	06-Jun-97
	895, 896	893, 894	6867074	366626	Standard	RR	19-Oct-96
	897, 898	895, 896	6866984	367043	Standard	RR	19-Oct-96
	-	897,898	6866861	367485	Standard	RR	06-Jun-97
Ice	899, 900	163, 164	6859414	380404	Standard	RR	23-Oct-96
	901, 902	899, 900	6859740	380625	Standard	RR	23-Oct-96
	903, 904	901, 902	6860088	380847	Standard	RR	23-Oct-96
	905, 906	903, 904	6860433	381063	Standard	RR	23-Oct-96
	907, 908	905, 906	6860770	381271	Standard	RR	23-Oct-96
	909, 910	907, 908	6861114	381485	Standard	RR	23-Oct-96
	911, 912	909, 910	6861453	381710	Standard	RR	23-Oct-96
	913, 914	911, 912	6861815	381927	Standard	RR	23-Oct-96
	-	913, 914	6862182	382141	Standard	RR	23-Oct-96
Ice	915, 916	775, 776	6866545	365702	Standard	RR	18-Aug-97
	917, 918	915, 916	6866411	366099	Standard	RR	18-Aug-97

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	919, 920	917, 918	6866309	366504	Standard	RR	18-Aug-97
	921, 922	919, 920	6866194	366920	Standard	RR	18-Aug-97
	923, 924	921, 922	6866064	367320	Standard	RR	18-Aug-97
	925, 926	923, 924	6865940	367714	Standard	RR	18-Aug-97
	927, 928	925, 926	6865815	368111	Standard	RR	18-Aug-97
	-	927, 928	6865682	368502	Standard	RR	18-Aug-97
Ice	929, 930	-	6866160	363383	Standard	RR	16-Aug-97
	931, 932	929, 930	6866046	363786	Standard	RR	16-Aug-97
	933, 934	931, 932	6865936	364185	Standard	RR	16-Aug-97
	935, 936	933, 934	6865820	364597	Standard	RR	16-Aug-97
	937, 938	935, 936	6865713	365014	Poor	RR	16-Aug-97
	939, 940	937, 938	6865630	365431	Standard	RR	16-Aug-97
	941, 942	939, 940	6865518	365822	Standard	RR	15-Aug-97
	943, 944	941, 942	6865442	366251	Standard	RR	15-Aug-97
	945, 946	943, 944	6865392	366667	Standard	RR	15-Aug-97
	947, 948	945, 946	6865307	367086	Standard	RR	15-Aug-97
	949, 950	947, 948	6865231	367489	Standard	RR	15-Aug-97
	951, 952	949, 950	6865112	367897	Standard	RR	14-Aug-97
	953, 954	951, 952	6865026	368308	Standard	RR	14-Aug-97
	955, 956	953, 954	6864888	368709	Standard	RR	14-Aug-97
	957, 958	955, 956	6864811	369099	Standard	RR	14-Aug-97
	-	957, 958	6864740	369534	Standard	RR	14-Aug-97
Ice	959, 960	-	-	-	N/S		
	961, 962	959, 960	6865443	363680	Standard	RR	27-Jul-97
	963, 964	961, 962	6865320	364085	Standard	RR	27-Jul-97
	965, 966	963, 964	6865217	364480	Standard	RR	27-Jul-97
	967, 968	965, 966	6865098	364880	Standard	RR	27-Jul-97
	969, 970	967, 968	6864978	365267	Standard	RR	27-Jul-97
	971, 972	969, 970	6864857	365658	Standard	RR	27-Jul-97
	973, 974	971, 972	6864719	366058	Standard	RR	27-Jul-97
	975, 976	973, 974	6864594	366448	Standard	RR	28-Jul-97
	977, 978	975, 976	6864482	366840	Standard	RR	28-Jul-97
	979, 980	977, 978	6864370	367262	Standard	RR	28-Jul-97
	981, 982	979, 980	6864250	367653	Standard	RR	28-Jul-97
	983, 984	981, 982	6864108	368029	Standard	RR	28-Jul-97
	985, 986	983, 984	6864044	368410	Standard	RR	15-Aug-97
	987, 988	985, 986	6863908	368793	Standard	RR	15-Aug-97
	989	987, 988	6863786	369200	Standard	RR	15-Aug-97
	990	989	6863743	369587	Standard	RR	15-Aug-97
	-	990	6863637	369994	Standard	RR	15-Aug-97
Ice	991, 992	-	6864770	363107	Standard	RR	13-Aug-97
	993, 994	991, 992	6864648	363505	Standard	RR	13-Aug-97
	995, 996	993, 994	6864531	363903	Standard	RR	12-Aug-97
	997, 998	995, 996	6864413	364314	Standard	RR	12-Aug-97
	999, 1000	997, 998	6864302	364707	Standard	RR	12-Aug-97
	1001, 1002	999, 1000	6864187	365107	Standard	RR	12-Aug-97
	1003, 1004	1001, 1002	6864063	365493	Standard	RR	12-Aug-97
	1005, 1006	1003, 1004	-	-	N/S		
	1007, 1008	1005, 1006	6863778	366240	Standard	RR	12-Aug-97
	1009, 1010	1007, 1008	6863629	366604	Standard	W	07-Aug-96
	1011, 1012	1009, 1010	6863529	367053	Standard	W	07-Aug-96
	1013, 1014	1011, 1012	6863471	367455	Standard	W	07-Aug-96
	1015, 1016	1013, 1014	-	-	N/S		
	1017, 1018	1015, 1016	-	-	N/S		

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	1019, 1020	1017, 1018	-	-	N/S		
	-	1019, 1020	-	-	N/S		
Ice	1021, 1022	-	-	-	N/S		
	1023, 1024	1021, 1022	-	-	N/S		
	1025, 1026	1023, 1024	-	-	N/S		
	1027, 1028	1025, 1026	-	-	N/S		
	-	1027, 2028	-	-	N/S		
Ice	1029	-	6864030	363491	Standard	RR	13-Aug-97
	1030	1029	6863937	363870	Standard	RR	13-Aug-97
	1031	1030	6863782	364200	Standard	RR	13-Aug-97
	1032	1031	-	-	N/S		
	1033	1032	-	-	N/S		
	1034	1033	-	-	N/S		
	1035	1034	-	-	N/S		
	1036	1035	6863355	366308	Standard	RR	08-Aug-96
	1037	1036	6863226	366709	Standard	W	07-Aug-96
	1038	1037	-	-	N/S		
	1039	1038	-	-	N/S		
	1040	1039	-	-	N/S		
	1041	1040	-	-	N/S		
	-	1041	-	-	N/S		
Ice	1042, 1043	-	-	-	N/S		
	1044, 1045	1042, 1043	6858771	379179	Standard	RR	07-Aug-97
	1046, 1047	1044, 1045	6859120	379392	Standard	RR	09-Aug-96
	1048, 1049	1046, 1047	6859480	379604	Standard	RR	09-Aug-96
	1050, 1051	1048, 1049	6859834	379806	Standard	RR	09-Aug-96
	1052, 1053	1050, 1051	-	-	NS		
	1054, 1055	1052, 1053	6860549	380232	Standard	RR	09-Aug-96
	1056, 1057	1054, 1055	6860885	380440	Standard	RR	09-Aug-96
	1058, 1059	1056, 1057	6861243	380631	Standard	RR	09-Aug-96
	1060, 1061	1058, 1059	6861597	380839	Standard	RR	09-Aug-96
	1062, 1063	1060, 1061	-	-	NS		
	1064, 1065	1062, 1063	-	-	NS		
	1066, 1067	1064, 1065	-	-	NS		
	1068, 1069	1066, 1067	-	-	NS		
	1070, 1071	1068, 1069	-	-	NS		
	-	1070, 1071	-	-	NS		
Ice	1072, 1073	-	6866349	367782	Standard	RR	10-Jun-97
	1074, 1075	1072, 1073	6866763	367880	Standard	RR	10-Jun-97
	1076, 1077	1074, 1075	6867171	367987	Standard	RR	10-Jun-97
	1078, 1079	1076, 1077	6867558	368095	Standard	RR	10-Jun-97
	-	1078, 1079	6867952	368208	Standard	RR	10-Jun-97
Ice	1080, 1081	-	-	-	N/S		
	-	1080, 1081	-	-	N/S		
Ice	1082, 1083	-	-	-	NS		
	1084, 1085	1082, 1083	6866234	378972	Standard	RR	20-May-97
	1086, 1087	1084, 1085	6866625	379162	Standard	RR	20-May-97
	-	1086, 1087	6866969	379315	Standard	RR	20-May-97
Ice	1088, 1089	-	6865494	379513	Standard	RR	20-May-97
	1090, 1091	1088, 1089	-	-	NS		

Claim	Posts 1	Posts 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Ice	1092, 1093	1090, 1091	6866209	379879	Standard	RR	20-May-97
	-	1092, 1093	6866555	380037	Standard	RR	20-May-97
Ice	1094, 1095	-	6865105	380254	Poor	RR	20-May-97
	1096, 1097	1094, 1095	6865480	380438	Standard	RR	20-May-97
	1098, 1099	1096, 1097	6865848	380611	Uncorrected	RR	20-May-97
	-	1098, 1099	6866205	380796	Standard	RR	20-May-97
Ice	1100, 1101	-	-	-	N/S		
	-	1100, 1101	-	-	N/S		
Ice	1102, 1103	-	6866670	378223	Standard	RR	20-May-97
	1104, 1105	1102, 1103	6867027	378413	Standard	RR	20-May-97
	-	1104, 1105	6867394	378593	Standard	RR	20-May-97

C. Geological Stations

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	BB19001		6856858	383936	Poor	RR	01-Jun-97
	BB19012		6858247	378950	Poor	RR	02-Jun-97
	BB19017		6858407	379237	Poor	RR	02-Jun-97
contour soils	BB09538		6863986	366524	Standard	RR	08-Aug-96
	BB09542		6863865	366305	Standard	RR	08-Aug-96
	BB09547		6863393	366378	Standard	RR	08-Aug-96
contour soils	BB06001		6867755	371320	Standard	W	31-Jul-96
	BB06002		6867393	370595	Standard	W	31-Jul-96
	BB06004		6867548	370466	Standard	W	31-Jul-96
	BB06006		6867747	370638	Standard	W	31-Jul-96
contour soils	BB14043		6866067	377691	Standard	RR	14-Jun-97
	N/S		6865709	377621	Standard	RR	14-Jun-97
	N/S		6865375	377462	Standard	RR	14-Jun-97
	BB14049		6865058	377314	Standard	RR	14-Jun-97
	BB14052		6864653	377129	Standard	RR	14-Jun-97
contour soils	BB14058		6858194	378000	Standard	RR	04-Jul-97
	BB14063		6858260	378487	Standard	RR	04-Jul-97
	BB14068		6858152	378887	Standard	RR	04-Jul-97
	BB14073		6858245	379282	Standard	RR	04-Jul-97
	N/S		6858155	379718	Standard	RR	04-Jul-97
	N/S		6858180	380182	Standard	RR	04-Jul-97
	N/S		6858068	380553	Standard	RR	04-Jul-97
contour soils	N/S		6868847	365457	Standard	RR	07-Jun-97
	BB14506		6868530	365626	Standard	RR	07-Jun-97
	BB14510		6868239	365861	Poor	RR	07-Jun-97
	BB14514		6867988	366150	Standard	RR	07-Jun-97
	BB14518		6867822	366464	Poor	RR	07-Jun-97
contour soils	BB14519		6868411	369225	Standard	RR	07-Jun-97
	BB14523		6868028	369193	Standard	RR	07-Jun-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	BB14527		6867639	369252	Standard	RR	07-Jun-97
	BB14531		6867495	369589	Standard	RR	07-Jun-97
	BB14535		6867398	370369	Poor	RR	07-Jun-97
	BB14539		6867445	370383	Uncorrected	-	07-Jun-97
contour soils	BB14545		6867853	366795	Standard	RR	09-Jun-97
	BB14549		6868020	367144	Standard	RR	09-Jun-97
	BB14552		6868280	367424	Standard	RR	09-Jun-97
contour soils	BB11597		6864122	377176	Standard	RR	25-Jun-97
	BB11594		6864473	377345	Standard	RR	25-Jun-97
	N/S		6864817	377515	Standard	RR	25-Jun-97
	BB11590		6865157	377679	Standard	RR	25-Jun-97
	BB11589		6865502	377857	Standard	RR	25-Jun-97
	BB11586		6865859	378040	Standard	RR	25-Jun-97
	BB11583		6866122	378163	Standard	RR	25-Jun-97
contour soils	BB11686		6864195	378916	Standard	RR	02-Jul-97
	BB11705		6864250	379173	Standard	RR	02-Jul-97
	N/S		6863801	379220	Standard	RR	02-Jul-97
	BB11713		6863385	378987	Standard	RR	02-Jul-97
	BB11718		6863014	378699	Standard	RR	02-Jul-97
	BB11723		6862577	378530	Standard	RR	02-Jul-97
	BB11728		6862119	378457	Standard	RR	02-Jul-97
	BB09572		6862172	378253	Standard	RR	02-Jul-97
contour soils	BB11776		6863143	375617	Standard	RR	07-Jul-97
	BB11784		6863554	374972	Poor	RR	07-Jul-97
	BB11789		6863813	374564	Standard	RR	07-Jul-97
contour soils	BB11756		6859814	380832	Standard	RR	06-Jul-97
	BB11757		6860485	380572	Standard	RR	06-Jul-97
	BB11760		6860831	380175	Standard	RR	06-Jul-97
	BB11765		6860648	379659	Standard	RR	06-Jul-97
	N/S		6860293	379385	Standard	RR	06-Jul-97
Contour soils	BB11811		6863429	375866	Standard	RR	09-Jul-97
	BB11816		6863679	375473	Standard	RR	09-Jul-97
	BB11821		6863938	375068	Standard	RR	09-Jul-97
	BB11827		6864256	374581	Standard	RR	09-Jul-97
	BB11831		6864454	374244	Standard	RR	09-Jul-97
	BB11836		6864753	374630	Standard	RR	09-Jul-97
contour soils	BB11930		6865056	381223	Standard	RR	11-Aug-97
	BB11935		6865189	381589	Standard	RR	11-Aug-97
	N/S		6865622	381547	Standard	RR	11-Aug-97
	BB11941		6866057	381584	Standard	RR	11-Aug-97
	N/S		6866661	381616	Standard	RR	11-Aug-97
contour soils	BB12541		6866041	378335	Standard	RR	25-Jun-97
	BB12543		6865700	378165	Standard	RR	25-Jun-97
	BB12545		6865360	377989	Poor	RR	25-Jun-97
	BB12547		6865019	377812	Standard	RR	25-Jun-97
	BB12549		6864679	377633	Standard	RR	25-Jun-97
	BB12551		6864340	377460	Standard	RR	25-Jun-97
contour soils	BB12667		6866586	379223	Standard	RR	02-Jul-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	BB12668		6866800	379485	Standard	RR	02-Jul-97
	N/S		6866972	379487	Standard	RR	02-Jul-97
	N/S		6866972	378992	Standard	RR	02-Jul-97
contour soils	N/S		6866814	378628	Standard	RR	03-Jul-97
	BB12677		6866828	378304	Standard	RR	03-Jul-97
	N/S		6866778	378008	Standard	RR	03-Jul-97
	BB12680		6866695	377744	Standard	RR	03-Jul-97
	BB12683		6866658	377423	Standard	RR	03-Jul-97
	BB12686		6866534	377074	Poor	RR	03-Jul-97
	BB12687		6866433	376845	Standard	RR	03-Jul-97
	BB12691		6866251	376864	Standard	RR	03-Jul-97
	BB12693		6866288	377052	Standard	RR	03-Jul-97
contour soils	BB12694		6858628	377609	Standard	RR	04-Jul-97
	BB12696		6858785	377891	Standard	RR	04-Jul-97
	BB12702		6859068	378113	Standard	RR	04-Jul-97
	BB12704		6859219	378137	Standard	RR	04-Jul-97
	BB12708		6859613	378130	Poor	RR	04-Jul-97
	BB12710		6859886	378134	Standard	RR	04-Jul-97
	BB12712		6860254	378304	Standard	RR	04-Jul-97
	BB12715		6860645	378393	Standard	RR	04-Jul-97
	N/S		6860855	378700	Standard	RR	04-Jul-97
contour soils	N/S		6858564	377795	Standard	RR	06-Jul-97
	BB12742		6858637	377422	Standard	RR	06-Jul-97
	BB12746		6858822	377101	Standard	RR	06-Jul-97
	BB12750		6859183	377173	Standard	RR	06-Jul-97
	BB12752		6859546	377299	Poor	RR	06-Jul-97
	BB12755		6859825	377542	Standard	RR	06-Jul-97
	N/S		6860058	377995	Standard	RR	06-Jul-97
	BB12760		6860294	378358	Standard	RR	06-Jul-97
	BB12764		6860261	378687	Poor	RR	06-Jul-97
contour soils	N/S		6862552	375105	Standard	RR	07-Jul-97
	BB12768		6862741	374776	Standard	RR	07-Jul-97
	BB12772		6862929	374425	Standard	RR	07-Jul-97
	BB12776		6863197	373877	Poor	RR	07-Jul-97
	BB12778		6863229	373820	Standard	RR	07-Jul-97
	BB12782		6863453	373441	Standard	RR	07-Jul-97
	BB12788		6863766	372967	Standard	RR	07-Jul-97
contour soils	BB12821		6864758	371255	Standard	RR	11-Jul-97
	N/S		6864940	370918	Standard	RR	11-Jul-97
	BB12826		6865145	370597	Standard	RR	11-Jul-97
	BB12830		6865331	370254	Standard	RR	11-Jul-97
	BB12834		6865677	369635	Standard	RR	11-Jul-97
	N/S		6865920	369227	Standard	RR	11-Jul-97
contour soils	BB12841		6866102	368882	Standard	RR	12-Jul-97
	BB12847		6866371	368278	Standard	RR	12-Jul-97
	BB12851		6866539	367915	Standard	RR	12-Jul-97
	N/S		6866654	367668	Standard	RR	12-Jul-97
contour soils	BB12904		6868651	368456	Standard	RR	26-Jul-97
	BB12908		6868259	368394	Standard	RR	26-Jul-97
	N/S		6867878	368407	Standard	RR	26-Jul-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	BB12916		6867314	368362	Standard	RR	26-Jul-97
	BB12918		6867123	368358	Standard	RR	26-Jul-97
	BB12922		6866930	368663	Standard	RR	26-Jul-97
	BB12924		6866700	369067	Standard	RR	26-Jul-97
contour soils	BB14123		6866896	379652	Standard	RR	12-Aug-97
	BB14125		6866555	379649	Standard	RR	12-Aug-97
	N/S		6866300	379646	Standard	RR	12-Aug-97
contour soils	BB15420		6866804	373992	Standard	RR	20-Jun-97
	BB15423		6866610	373781	Standard	RR	20-Jun-97
	BB15426		6866339	373744	Standard	RR	20-Jun-97
	BB15428		6866104	373895	Standard	RR	20-Jun-97
	BB15432		6866172	374457	Standard	RR	20-Jun-97
	BB15435		6866361	374664	Standard	RR	20-Jun-97
soil samples	BB15754		6863405	369069	Standard	RR	16-Aug-97
	BB15760		6863263	369451	Standard	RR	16-Aug-97
	BB15763		6863146	369827	Standard	RR	16-Aug-97
	BB15768		6863003	370239	Standard	RR	16-Aug-97
	BB15773		6862887	370614	Standard	RR	16-Aug-97
contour soils	BB15778		6863380	368021	Standard	RR	18-Aug-97
	BB15782		6863055	367914	Standard	RR	18-Aug-97
	BB15786		6862798	367625	Standard	RR	18-Aug-97
	BB15790		6862531	367406	Standard	RR	18-Aug-97
	BB15794		6862264	367163	Standard	RR	18-Aug-97
	BB15799		6862206	366711	Standard	RR	18-Aug-97
contour soils	BB07105		6866733	379233	Standard	RR	12-Aug-97
	N/S		6866698	378864	Standard	RR	12-Aug-97
	BB07111		6866374	378199	Standard	RR	12-Aug-97
	BB07115		6866265	377838	Standard	RR	12-Aug-97
	BB07119		6866210	377464	Standard	RR	12-Aug-97
	BB07120		6866169	377279	Standard	RR	12-Aug-97
contour soils	BB07311		6868818	365272	Standard	RR	07-Jun-97
	BB07315		6868529	365311	Standard	RR	07-Jun-97
	BB07321		6868179	365553	Standard	RR	07-Jun-97
	BB07325		6867913	365814	Standard	RR	07-Jun-97
contour soils	BB07328		6867742	366044	Standard	RR	09-Jun-97
	BB07332		6867509	366461	Standard	RR	09-Jun-97
	BB07335		6867672	366809	Standard	RR	09-Jun-97
	BB07339		6867872	367105	Standard	RR	09-Jun-97
contour soils	BB07343		6868491	369099	Standard	RR	08-Jun-97
	BB07346		6868069	368959	Standard	RR	08-Jun-97
	BB07351		6867239	369226	Standard	RR	08-Jun-97
	BB07355		6867154	369598	Standard	RR	08-Jun-97
contour soils	BB09639		6867991	369793	Standard	RR	17-Jun-97
	BB11567		6868208	369949	Standard	RR	17-Jun-97
	N/S 1		6868102	370059	Standard	RR	17-Jun-97
	N/S 3		6868088	370240	Standard	RR	17-Jun-97
	BB11570		6868085	370432	Standard	RR	17-Jun-97
	BB11580		6867958	371320	Standard	RR	17-Jun-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	N/S		6859402	381409	Standard	RR	06-Aug-97
	BB11908		6858975	381604	Standard	RR	06-Aug-97
	N/S		6858550	381755	Poor	RR	06-Aug-97
	BB11913		6858076	381844	Standard	RR	06-Aug-97
	N/S		6857707	382145	Standard	RR	06-Aug-97
	N/S		6857334	382033	Standard	RR	06-Aug-97
	BB11922		6857129	381619	Standard	RR	06-Aug-97
contour soils	BB11999		6864594	379508	Standard	RR	03-Jul-97
	BB11995		6864936	379840	Standard	RR	03-Jul-97
	BB11989		6865692	380311	Standard	RR	03-Jul-97
	BB11985		6866121	380468	Poor	RR	03-Jul-97
	N/S		6866499	380660	Standard	RR	03-Jul-97
contour soils	N/S		6862664	378835	Poor	RR	08-Aug-97
	BB13080		6863321	379235	Standard	RR	08-Aug-97
	BB13084		6863618	379444	Standard	RR	08-Aug-97
	BB13089		6863654	379888	Standard	RR	08-Aug-97
	BB13093		6863558	380240	Standard	RR	08-Aug-97
contour soils	BB13097		6863544	380616	Standard	RR	09-Aug-97
	BB13100		6863545	380902	Standard	RR	09-Aug-97
	BB13102		6863294	380758	Standard	RR	09-Aug-97
	BB13106		6862887	380505	Standard	RR	09-Aug-97
	BB13108		6862717	380412	Standard	RR	09-Aug-97
	BB13112		6859723	384361	Standard	RR	10-Aug-97
	BB13114		6859374	384500	Standard	RR	10-Aug-97
	BB13115		6858876	384674	Standard	RR	10-Aug-97
contour soils	BB13119		6858516	384780	Poor	RR	11-Aug-97
	BB13126		6857760	384930	Standard	RR	11-Aug-97
	BB13130		6857373	385008	Standard	RR	11-Aug-97
	BB13133		6856932	385175	Standard	RR	11-Aug-97
	BB13134		6856279	385317	Poor	RR	11-Aug-97
contour soils	N/S		6866204	379646	Standard	RR	13-Aug-97
	BB14128		6866110	379659	Standard	RR	13-Aug-97
	BB14131		6865974	379300	Standard	RR	13-Aug-97
	BB14135		6865861	378940	Standard	RR	13-Aug-97
	BB14139		6865781	378599	Standard	RR	13-Aug-97
contour soils	BB15728		6864074	380920	Poor	RR	10-Aug-97
	BB15732		6864381	381145	Standard	RR	10-Aug-97
contour soils	BB15803		6861891	367128	Standard	RR	19-Aug-97
	BB15807		6861593	367058	Poor	RR	19-Aug-97
	BB15811		6861566	367523	Standard	RR	19-Aug-97
	BB15815		6861421	367878	Standard	RR	19-Aug-97
	BB15819		6861239	368274	Standard	RR	19-Aug-97
contour soils	BB16155		6868002	369883	Standard	RR	17-Jun-97
	BB16160		6867882	370346	Standard	RR	17-Jun-97
	BB16164		6868062	370767	Standard	RR	17-Jun-97
	BB16169		6867867	371250	Standard	RR	17-Jun-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
contour soils	BB16397		6861241	382037	Standard	RR	06-Aug-97
	BB16401		6861053	382365	Standard	RR	06-Aug-97
contour soils	BB16403		6860845	382681	Standard	RR	07-Aug-97
	BB16406		6860762	383056	Standard	RR	07-Aug-97
	BB16410		6860602	383413	Standard	RR	07-Aug-97
	BB16413		6860366	383722	Standard	RR	07-Aug-97
	BB16417		6860162	384050	Standard	RR	07-Aug-97
	BB16419		6860091	384226	Standard	RR	07-Aug-97
contour soils	BB16474		6865924	374257	Standard	RR	10-Jul-97
	BB16478		6866058	373887	Standard	RR	10-Jul-97
	BB16482		6866168	373531	Poor	RR	10-Jul-97
	BB16486		6866549	373580	Standard	RR	10-Jul-97
	BB16490		6866927	373658	Standard	RR	10-Jul-97
contour soils	N/S		6865617	381134	Standard	RR	11-Aug-97
	BB11500		6865966	381237	Standard	RR	11-Aug-97
	BB14120		6866322	381327	Standard	RR	11-Aug-97
	N/S		6866594	381408	Standard	RR	11-Aug-97
contour soils	N112202		6856255	385842	Standard	RR	06-Jun-97
	97BGPSO3		6855765	385157	Standard	RR	06-Jun-97
grid samples	BB15692	10200N 10000E	6863028	379656	Standard	RR	08-Aug-97
	BB15700	10200N 10400E	6863047	380034	Standard	RR	08-Aug-97
	BB15701	10100N 10000E	6862928	379650	Standard	RR	08-Aug-97
	BB15709	10100N 10400E	6862884	380013	Poor	RR	09-Aug-97
	BB15710	10000N 10000E	6862836	379640	Poor	RR	08-Aug-97
	BB15718	10000N 10400E	6862809	380013	Standard	RR	09-Aug-97
	BB15719	9900N 10000E	6862738	379638	Standard	RR	09-Aug-97
	BB15727	9900N 10400E	6862677	380009	Standard	RR	09-Aug-97
soil sample	BB1300		6861024	381176	Poor	RR	03-Aug-97
	N/S		6861118	380799	Standard	RR	03-Aug-97
	BB15590		6861177	380438	Standard	RR	03-Aug-97
	BB15594		6860999	380089	Standard	RR	03-Aug-97
	BB15600		6860847	379059	Standard	RR	03-Aug-97
soil sample	BB19600		6856549	386395	Standard	RR	05-Jun-97
	BB19602		6856700	386002	Standard	RR	05-Jun-97
	BB19604		6856817	385594	Standard	RR	05-Jun-97
soil sample	BB07356		6862535	375725	Uncorrected	-	13-Jun-97
Ice Road	RD-1 A	850	6851010	385150	Standard	RR	26-Oct-96
	RD-2 A	850	6851990	383112	Standard	RR	26-Oct-96
	RD.SURV Rf	949	6854214	378797	Standard	RR	26-Oct-96
	268.2671 No	926	6853613	379956	Standard	RR	26-Oct-96
	S RIVER Kel	834	6850363	385527	Standard	RR	26-Oct-96
	1KM S Kel	832	6849998	386425	Standard	RR	26-Oct-96
	2KM S Kel	864	6849444	386469	Standard	RR	26-Oct-96
	3KM S Kel	853	6848700	386482	Standard	RR	26-Oct-96
	KM268 Kel	869	6848237	387573	Standard	RR	26-Oct-96
Twin Camp	Arndfind		6868234	366270	Standard	RR	07-Jun-97

Station	Sample No.	Comments	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
outcrops	MARSH		6860141	377036	Standard	RR	28-May-97
	O/C 1		6860433	376867	Standard	RR	28-May-97
	O/C 2		6860478	376854	Standard	RR	28-May-97
	O/C 3		6860645	376915	Standard	RR	28-May-97
	O/C 4		6860697	376825	Standard	RR	28-May-97
	O/C 5		6860817	376857	Standard	RR	28-May-97
	O/C 6		6861013	376915	Standard	RR	28-May-97
	O/C 7		6861237	376912	Standard	RR	28-May-97
	BG1		6868018	369509	Standard	RR	10-Jun-97
	BG8		6867753	369498	Standard	RR	10-Jun-97
	BG1A		6867996	369253	Standard	RR	10-Jun-97
o/c, soil sampl	BB19032		6856352	385939	Standard	RR	06-Jun-97
Survey station	4219		6862229	376603	Standard	RR	01-Jun-97

D. Claim Posts From Adjoining Claim Blocks

Claim	Posts 1	Post 2	UTM Coordinates Northing	Easting	Data Quality	Base Station	Date
Pin	9, 10	7, 8	6868930	357960	Standard	RR	29-May-97

093869 4/5

APPENDIX V

SYNOPTIC DRILL LOGS

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-01 | **Property:** ICE | **Section:** 11,000 N

Easting:	Northing:	Elevation:	Depth:
376,626.65	6,862,487.54	1,256.30	181.66

Logger: Lee Pigage
Drilling Dates: July 6-11, 1996

Depth	0.00	181.66	
Azimuth	305	305	
Dip	-50	-57	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	7.62	7.62		CSDH	casing										
7.62	14.10	6.48	T	BRBS	breccia basalt "aphanitic"										
						7.62	9.14	1.52	N110802	79	0.25%	21	686	0.2	<5
						9.14	10.67	1.53	N110803	71	0.13%	19	646	0.4	<5
						10.67	12.80	2.13	N110804	96	0.16%	22	558	0.2	<5
						12.80	14.10	1.30	N110805	84	0.08%	20	208	0.2	<5
14.10	18.59	4.49	T	MSBS	massive basalt "aphanitic"										
						14.10	15.54	1.44	N110806	96	0.16%	21	160	<0.2	<5
						15.54	16.76	1.22	N110807	99	0.19%	33	282	<0.2	<5
						16.76	18.59	1.83	N110808	95	0.28%	25	130	<0.2	<5
18.59	23.50	4.91	T	BRBS	breccia basalt "aphanitic"										
						18.59	19.90	1.31	N110809	93	0.28%	36	282	<0.2	<5
						19.90	21.34	1.44	N110810	91	1.05%	85	802	0.6	<5
						21.34	23.50	2.16	N110811	98	1.11%	86	676	<0.2	<5
23.50	24.75	1.25	T	SDST	sandstone with basalt										
						23.50	24.75	1.25	N110812	98	0.98 %	100	904	0.2	<5
24.75	29.90	5.15	T	MSCH	grey massive chert										
						24.75	26.67	1.92	N110813	93	0.32%	16	162	<0.2	<5
						26.67	28.18	1.51	N110814	85	0.54%	11	108	<0.2	<5
						28.18	29.90	1.72	N110815	90	0.50%	60	838	0.2	<5
29.90	33.00	3.01	T	CBMS	dark grey mudstone										
						29.90	31.40	1.50	N110816	94	0.56%	18	220	<0.2	20
						31.40	33.00	1.60	N110817	68	0.63%	85	1030	0.2	5
33.00	42.06	9.06	T	RBCH	grey ribbon bedded chert										
						33.00	34.44	1.44	N110818	88	0.24%	44	388	<0.2	<5
						34.44	36.58	2.14	N110819	51	0.20%	43	426	<0.2	10
						36.58	38.05	1.47	N110820	39	0.20%	53	374	0.2	<5
						38.05	39.62	1.57	N110821	29	0.32%	36	340	0.2	<5
						39.62	40.50	0.88	N110822	65	0.27%	38	364	<0.2	<5
						40.50	42.06	1.56	N110823	26	0.39%	36	368	<0.2	<5
42.06	55.10	13.04	F	RBCH	grey ribbon chert										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG *Hole:* IC96-01 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						42.06	43.40	1.34	N110824	88	736	34	286	0.2	
						43.40	45.11	1.71	N111075	53	334	17	162	0.2	
						45.11	47.15	2.04	N111076	29	337	20	228	<0.2	
55.10	58.37	3.27	T	SDST	sandstone with basalt										
58.37	65.95	7.58	F	RBCH	grey ribbon chert										
						65.23	65.95	0.72	N110898	86	60	7	78	0.2	
65.95	74.75	8.80	F	RBCH	grey and green ribbon chert										
						65.95	67.36	1.41	N110899	110	58	10	56	<0.2	
						67.36	69.49	2.13	N110900	70	61	7	84	<0.2	
						69.49	71.07	1.58	N110901	86	62	7	66	0.2	
						71.07	72.54	1.47	N110902	86	86	9	74	0.2	
74.75	75.25	0.50	F	SDST	grey sandstone										
75.25	86.11	10.86	F	RBCH	grey ribbon chert										
						84.40	85.34	0.94	N110903	36	73	13	108	0.2	
86.11	92.04	5.93	F	RBCH	grey and green ribbon chert										
92.04	95.60	3.56	F	MSBS	amygdaloidal basalt "aphanitic"										
95.60	167.20	71.60	F	MSBS	massive basalt "grainy"										
167.20	168.90	1.70	F	MSBS	massive aphanitic basalt "aphanitic"										
168.90	181.66	12.76	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-02 | Property: ICE | Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,768.49	6,862,687.35	1,289.54	116.13	Thomas Becker	July 12-14, 1996

Depth	0.00				
Azimuth	288				
Dip	-49				
Method	Silva				

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	4.30	2.47		LCDH	missing core										
4.30	14.82	10.52	T	MSBS	massive basalt "grainy"										
						4.30	5.50	1.20	N110825	90	56	28	92	<0.2	5
						5.50	6.70	1.20	N110826	97	72	47	256	<0.2	<5
						6.70	7.92	1.22	N110827	97	68	26	98	<0.2	5
						7.92	9.45	1.53	N110828	100	66	26	98	<0.2	10
						9.45	10.97	1.52	N110829	98	66	34	134	<0.2	<5
						10.97	12.80	1.83	N110830	98	70	43	246	<0.2	<5
						12.80	14.82	2.02	N110831	94	62	42	158	<0.2	<5
14.82	15.60	0.78	S	GGBS	clay gouge basalt										
						14.82	15.60	0.78	N110832	100	68	68	204	<0.2	<5
15.60	19.00	3.40	S	FBBS	fault breccia basalt "grainy"										
					-matrix has strongly limonite stained carbonate material	15.60	17.07	1.47	N110833	82	0.18 %	47	438	<0.2	<5
						17.07	19.00	1.93	N110834	88	0.29 %	127	1755	<0.2	<5
19.00	24.99	5.99	S	GGBS	clay gouge basalt										
						19.00	20.73	1.73	N110835	37	0.38 %	104	1250	<0.2	5
						20.73	21.89	1.16	N110836	77	0.02 %	42	110	<0.2	5
						21.89	23.32	1.43	N110837	66	<0.01%	30	116	<0.2	<5
						23.32	24.99	1.67	N110838	74	0.25 %	152	1615	<0.2	10
24.99	28.75	3.76	S	FBBS	fault breccia basalt "grainy"										
						24.99	26.76	1.77	N110839	59	1.02 %	223	6520	<0.2	20
						26.76	28.75	1.99	N110840	51	4.10 %	301	1390	1	30
28.75	31.70	2.95	S	BRBS	breccia basalt										
					-along fractures it contains cuprite, chalcopyrite,	28.75	30.17	1.42	N110841	92	4.72 %	45	428	<0.2	<5
					and black wads	30.17	31.70	1.53	N110842	92	1.13 %	97	2000	<0.2	<5
31.70	37.40	5.70	S	GGBS	clay gouge basalt										
					-trace pyrite and chalcopyrite	31.70	32.92	1.22	N110843	60	1.93 %	82	1150	<0.2	<5
						32.92	34.44	1.52	N110844	57	0.93 %	142	2760	<0.2	<5
						34.44	37.40	2.96	N110845	59	0.56 %	271	4230	1	15
37.40	43.59	6.19	S	FBBS	fault breccia basalt										

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-trace pyrite and chalcopyrite	37.40	39.01	1.61	N110846	63	0.02 %	155	2320	<0.2	<5
						39.01	40.54	1.53	N110847	55	0.39 %	92	2030	<0.2	<5
						40.54	42.06	1.52	N110848	100	0.46 %	122	2660	<0.2	5
						42.06	43.59	1.53	N110849	100	0.99 %	116	3500	<0.2	<5
43.59	45.55	1.69	T	FBBS	sulphides in fault breccia										
					-pyrite and specular hematite with trace chalcopyrite	43.59	45.55	1.96	N110850	62	2.97 %	328	638	<0.2	20
45.55	46.00	0.45	S	FBBS	fault breccia basalt										
					-fractures with chalcocite or black wad	45.55	46.63	1.08	N110885	90	5.03 %	156	1110	<0.2	15
46.00	49.35	3.35	T	GGBS	clay gouge basalt										
						46.63	48.16	1.53	N110886	100	7.13 %	476	814	<0.2	<5
						48.16	49.35	1.19	N110887	42	8.29 %	349	8160	<0.2	10
49.35	56.50	7.15	T	FBBS	fault breccia basalt "grainy"										
						49.35	50.57	1.22	N110888	99	1.49%	226	1930	2	95
						50.57	53.08	2.51	N110889	45	1.20%	150	4260	2	90
						53.08	54.55	1.47	N110890	90	0.59%	161	1805	1	10
						54.55	56.62	2.07	N110891	80	0.86%	137	4830	<0.2	<5
56.50	67.97	11.47	T	MSBS	massive basalt "grainy"										
						56.62	58.24	1.62	N110892	84	0.45%	107	3850	<0.2	<5
						58.24	60.20	1.96	N110893	49	0.28%	86	2930	<0.2	<5
						60.20	61.82	1.62	N110894	83	266	50	874	<0.2	<5
						61.82	63.37	1.55	N110895	81	202	39	338	<0.2	<5
						63.37	65.07	1.70	N110896	79	523	42	490	<0.2	<5
						65.07	66.60	1.53	N110897	88	1965	52	1040	<0.2	<5
						66.60	67.97	1.37	N111101	18	1765	77	1575	<0.2	
67.97	71.80	3.83	F	FBBS	fault breccia basalt "grainy"										
						67.97	69.49	1.52	N111102	33	71	55	948	<0.2	
						69.49	71.02	1.53	N111103	30	95	63	426	<0.2	
71.80	74.14	2.34	F	MSBS	massive basalt "grainy"										
74.14	75.30	1.16	F	FBBS	fault breccia basalt										
75.30	78.08	2.78	F	BRBS	breccia basalt "aphanitic"										
						75.30	76.81	1.51	N111104	26	357	63	1480	0.6	
						76.81	78.08	1.27	N111105	64	310	50	1575	0.4	
78.08	80.77	2.69	F	BRBS	breccia basalt with pyrite										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-02 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					- ~2% fine grained disseminated pyrite in matrix	78.08	79.55	1.47	N111106	93	458	44	710	0.8	
						79.55	80.77	1.22	N111107	93	78	31	476	<0.2	
80.77	85.23	4.46	F	BRBS	breccia basalt "aphanitic"										
						80.77	82.60	1.83	N111108	100	63	27	370	<0.2	
85.23	116.16	31.05	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-03 Property: ICE Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:
376,806.71	6,862,636.45	1,277.80	152.40

Logger: Lee Pigage
Drilling Dates: July 27-Aug 1, 1996

Depth	0.00	137.16			
Azimuth	316				
Dip	-50	-48			
Method	Brunton	Acid			

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	3.66	1.83	T	MSBS	massive basalt "grainy"										
					-medium to dark limonite on fractures	1.83	3.28	1.45	N110935	100	66	32	80	<0.2	<5
						3.28	3.66	0.38	N110936	79	82	40	100	<0.2	<5
3.66	4.95	1.29	F	HECH	hematitic chert										
						3.66	4.95	1.29	N110937	48	79	8	18	<0.2	<5
4.95	11.12	6.30	T	MSBS	massive basalt "grainy"										
					-brown limonite on fractures surfaces	4.95	6.52	1.57	N110938	100	56	36	104	<0.2	<5
						6.52	8.00	1.48	N110939	74	69	29	92	<0.2	<5
						8.00	9.75	1.75	N110940	86	66	35	108	<0.2	<5
						9.75	10.95	1.20	N110941	86	63	35	102	<0.2	<5
						10.95	11.12	0.17	N110942	88	29	8	14	<0.2	<5
11.12	22.42	11.17	F	MSBS	massive basalt "grainy"										
						11.12	12.80	1.68	N110943	100	61	34	78	<0.2	<5
						12.80	14.33	1.53	N110944	98	69	34	82	<0.2	<5
						14.33	16.50	2.17	N110945	92	76	31	86	<0.2	<5
						16.50	17.07	0.57	N110946	70	56	25	72	<0.2	<5
						17.07	18.90	1.83	N110947	74	63	29	74	<0.2	<5
						18.90	20.65	1.75	N110948	60	67	30	78	<0.2	<5
						20.65	22.42	1.77	N110949	68	68	30	82	<0.2	<5
22.42	23.52	1.10	F	FBBS	sheared basalt										
						22.42	23.52	1.10	N110950	78	53	27	64	<0.2	<5
23.52	47.30	23.78	F	MSBS	massive basalt "grainy"										
					-disseminated epidote in matrix	23.52	24.99	1.47	N111001	65	69	32	82	<0.2	<5
						24.99	26.37	1.38	N111002	87	63	28	76	<0.2	<5
						26.37	27.37	1.00	N111003	80	72	26	68	<0.2	<5
						27.48	29.05	1.57	N111004	83	57	25	84	<0.2	<5
						29.05	30.48	1.43	N111005	67	54	25	76	<0.2	<5
						30.48	32.00	1.52	N111006	79	44	25	74	<0.2	<5
						32.00	32.18	0.18	N111007	100	37	27	78	<0.2	<5
						32.18	34.14	1.96	N111008	57	44	25	76	<0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						34.14	36.00	1.86	N111009	91	57	28	90	<0.2	<5
						36.00	37.95	1.95	N111010	100	53	27	84	<0.2	<5
						37.95	38.27	0.32	N111011	68	59	32	96	<0.2	<5
						38.27	40.23	1.96	N111012	75	57	28	90	<0.2	<5
						40.23	42.06	1.83	N111013	72	55	25	84	<0.2	<5
						42.06	42.48	0.42	N111014	83	53	30	92	<0.2	<5
						42.48	44.08	1.60	N111015	43	57	27	86	<0.2	<5
						44.08	45.72	1.64	N111016	32	59	29	86	<0.2	<5
						45.72	47.30	1.58	N111017	45	59	25	78	<0.2	<5
47.30	58.22	10.92	F	PHBS	porphyritic breccia basalt "aphanitic"										
						47.43	47.92	0.49	N111018	55	58	21	78	<0.2	<5
						47.92	49.53	1.61	N111019	35	82	24	56	<0.2	<5
						49.53	51.36	1.83	N111020	70	79	25	54	<0.2	<5
						51.36	53.11	1.75	N111021	82	73	23	50	<0.2	<5
						53.11	54.71	1.60	N111022	68	82	25	54	<0.2	<5
						54.71	56.39	1.68	N111023	64	77	26	56	<0.2	<5
						56.39	58.22	1.83	N111024	45	96	27	58	<0.2	<5
58.22	60.35	2.13	F	PHBS	epidote altered basalt "aphanitic"										
						58.22	60.35	2.13	N111025	32	534	35	120	<0.2	<5
60.35	62.71	2.36	F	SSSG	stringer sulphides in breccia basalt "aphanitic"										
					-bands and stringers of quartz with	60.35	61.57	1.22	N111026	67	1.32%	140	366	2.2	40
					disseminated pyrite and some hematite	61.57	62.71	1.14	N111027	81	1.18%	112	854	1.6	50
62.71	63.20	0.49	F	GGSG	gouged stringer sulphides										
					-broken fragments of quartz stringers	62.71	63.20	0.49	N111028	78	0.05%	109	152	<0.2	15
63.20	70.20	7.00	F	HESG	hematitic breccia basalt										
					-matrix consists of specular	63.20	64.77	1.57	N111029	52	0.09%	82	134	0.2	10
					hematite-quartz-earthy hematite	64.77	66.65	1.88	N111030	30	0.03%	73	72	<0.2	10
						66.65	67.00	0.35	N111031	43	0.01%	104	94	<0.2	<5
						67.00	67.80	0.80	N111032	56	0.12%	111	86	0.4	10
						67.80	68.88	1.08	N111033	100	0.01%	88	74	<0.2	5
						68.88	70.20	1.32	N111034	60	0.02%	75	908	0.2	60
70.20	74.37	4.17	F	SGBS	breccia basalt with stringer sulphides										
					-matrix is 5-10% quartz veins with	70.20	71.60	1.40	N111035	36	22	88	192	<0.2	10

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-pyrite-specular hematite-earthy hematite	71.60	72.69	1.09	N111036	100	315	106	980	0.6	20
						72.69	74.37	1.68	N111037	71	240	110	4780	0.2	30
74.37	85.63	11.26	F	BRBS	breccia basalt "aphanitic"										
						74.37	75.74	1.37	N111038	93	122	69	2040	<0.2	45
						75.74	77.05	1.31	N111039	47	570	62	538	0.2	15
						77.05	78.38	1.33	N111040	59	397	50	584	<0.2	10
						78.38	78.54	0.16	N111041	100	251	37	228	<0.2	10
						78.54	80.47	1.93	N111042	49	183	34	288	<0.2	<5
						80.47	82.30	1.83	N111043	75	142	33	328	<0.2	<5
						82.30	84.12	1.82	N111044	59	105	31	154	<0.2	<5
						84.12	85.63	1.51	N111045	95	101	32	312	<0.2	<5
85.63	88.70	3.07	F	FBBS	basalt fault breccia "aphanitic"										
					-maroon hematite dust rims on fragments	85.63	86.41	0.78	N111046	60	228	57	288	<0.2	<5
						86.41	87.55	1.14	N111047	80	390	58	242	<0.2	<5
						87.55	88.70	1.15	N111048	60	886	73	852	0.2	30
88.70	105.16	16.46	F	BRBS	hematitic breccia basalt "aphanitic"										
					-maroon hematite dust rims on fragments	88.70	90.75	2.05	N111049	79	17	39	80	<0.2	<5
						90.75	92.81	2.06	N111050	93	35	29	56	<0.2	<5
						92.81	94.86	2.05	N111051	94	65	24	54	<0.2	<5
						94.86	96.91	2.05	N111052	98	65	22	48	<0.2	<5
						96.91	98.97	2.06	N111053	93	72	25	54	<0.2	<5
						98.97	101.04	2.07	N111054	95	54	25	54	<0.2	<5
						101.04	103.00	1.96	N111055	100	59	25	54	<0.2	<5
						103.00	105.16	2.16	N111056	80	89	28	78	<0.2	<5
105.16	117.71	12.55	F	BRBS	breccia basalt "aphanitic"										
						105.16	106.23	1.07	N111057	86	69	26	70	<0.2	<5
						106.23	108.12	1.89	N111058	96	65	29	84	<0.2	<5
						108.12	109.26	1.14	N111059	97	68	30	94	<0.2	<5
						109.26	110.40	1.14	N111060	92	68	27	92	<0.2	<5
						110.40	111.90	1.50	N111061	82	57	31	148	<0.2	<5
						111.90	113.39	1.49	N111062	83	53	29	100	<0.2	<5
						113.39	115.00	1.61	N111063	100	112	32	1310	<0.2	<5
						115.00	116.43	1.43	N111064	87	50	29	86	<0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-03 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						116.43	117.01	0.58	N111065	100	91	30	186	<0.2	<5
						117.01	117.71	0.70	N111066	96	94	34	206	<0.2	<5
117.71	122.85	5.14	F	SSSG	breccia basalt with stringers "aphanitic"										
					-stringers and veins of quartz-pyrite-chalcopyrite	117.71	118.81	1.10	N111067	47	0.30%	97	214	1.0	<5
					cross-cutting fragments	118.81	120.40	1.59	N111068	44	0.35%	106	482	0.2	<5
					-pyrite content varies from 1 to 75%	120.40	121.92	1.52	N111069	83	0.33%	130	226	0.2	10
						121.92	122.85	0.93	N111070	68	0.45%	117	422	0.2	15
122.85	135.96	13.11	F	BRBS	breccia basalt "aphanitic"										
						122.85	124.84	1.99	N111071	100	118	30	228	<0.2	<5
						124.84	126.82	1.98	N111072	90	109	30	94	0.2	<5
						126.82	128.63	1.81	N111073	93	86	32	138	<0.2	<5
						128.63	130.76	2.13	N111074	85	107	26	118	<0.2	<5
135.96	142.95	6.99	F	MSBS	massive basalt "grainy"										
142.95	152.40	9.45	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-04 | Property: ICE | Section: 11,146 N

Easting:	Northing:	Elevation:	Depth:
376,722.75	6,862,637.72	1,282.87	148.29

Logger: Lee Pigage
Drilling Dates: Aug 1-6, 1996

Depth 0.00 | Azimuth 308 | Dip -50 | Method Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	15.48	13.65	T	BRBS	epidote altered breccia basalt "aphanitic"	1.83	2.43	0.60	N111078	61	0.09%	24	94	<0.2	<5
					-contains trace malachite	2.43	3.35	0.92	N111079	45	0.18%	23	106	<0.2	<5
						3.35	5.00	1.65	N111080	83	0.15%	33	138	<0.2	<5
						5.00	6.40	1.40	N111081	83	0.17%	34	180	<0.2	<5
						6.40	7.62	1.22	N111082	52	0.28%	37	202	<0.2	<5
						7.62	9.42	1.80	N111083	78	0.15%	33	162	<0.2	<5
						9.42	10.97	1.55	N111084	66	0.12%	25	124	<0.2	<5
						10.97	12.65	1.68	N111085	81	0.21%	32	206	<0.2	<5
						12.65	14.02	1.37	N111086	87	0.21%	31	102	<0.2	<5
						14.02	15.48	1.46	N111087	76	0.24%	30	114	<0.2	<5
15.48	18.90	3.42	T	BRBS	breccia basalt with malachite and cuprite "aphanitic"										
						15.48	17.07	1.59	N111088	56	0.34%	35	150	<0.2	<5
						17.07	17.98	0.91	N111089	40	0.32%	26	158	<0.2	5
						17.98	18.90	0.92	N111090	39	0.21%	21	104	<0.2	<5
18.90	22.56	3.66	T	BRBS	breccia basalt "aphanitic"										
						18.90	20.27	1.37	N111091	25	0.39%	26	114	<0.2	<5
						20.27	21.34	1.07	N111092	24	0.08%	30	270	<0.2	<5
						21.34	22.56	1.22	N111093	32	0.09%	42	842	4.8	<5
22.56	23.62	1.06	S	BRBS	limonite cemented breccia basalt										
						22.56	23.62	1.06	N111094	19	1.02%	507	>10000	<0.2	<5
23.62	30.18	6.56	T	BRBS	breccia basalt "aphanitic"										
						23.62	25.00	1.38	N111095	71	0.20%	96	1975	<0.2	<5
						25.00	26.52	1.52	N111096	62	0.25%	63	1100	0.6	<5
						26.52	28.04	1.52	N111097	94	0.46%	89	1420	<0.2	<5
						28.04	29.11	1.07	N111098	90	0.46%	94	1350	<0.2	<5
						29.11	30.18	1.07	N111099	100	0.39%	140	2690	<0.2	<5
30.18	31.09	0.91	S	SHBS	sheared breccia basalt "aphanitic"										
						30.18	31.09	0.91	N111100	99	0.48%	431	6600	<0.2	<5
31.09	33.22	2.13	T	BRBS	broken breccia basalt "aphanitic"										
						31.09	32.46	1.37	N111151	97	0.16%	120	2960	<0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						32.46	33.15	0.69	N111152	100	0.33%	144	3110	<0.2	15
33.22	37.19	3.97	T	GGBS	breccia basalt gouge "aphanitic"										
						33.15	34.75	1.60	N111153	48	0.31%	172	3430	<0.2	<5
						34.75	36.27	1.52	N111154	78	0.05%	185	4870	<0.2	<5
						36.27	37.19	0.92	N111155	95	0.1%	131	3770	<0.2	<5
37.19	38.60	1.41	T	MSBS	massive basalt "grainy"										
						37.19	38.56	1.37	N111156	97	0.11%	145	3790	<0.2	<5
38.60	40.23	1.63	S	BRBS	weathered breccia basalt "aphanitic"										
						38.56	40.23	1.67	N111157	80	0.47%	353	10000	<0.2	<5
40.23	52.88	12.65	F	BRBS	breccia basalt										
						40.23	41.00	0.77	N111158	56	0.09%	63	1500	<0.2	<5
						41.00	42.52	1.52	N111159	100	106	49	552	<0.2	<5
						42.52	43.28	0.76	N111160	100	144	38	202	<0.2	<5
						43.28	44.81	1.53	N111161	100	105	31	86	<0.2	<5
						44.81	45.57	0.76	N111162	100	116	29	116	<0.2	<5
						45.57	46.90	1.33	N111163	100	81	24	76	<0.2	<5
						46.90	48.35	1.45	N111164	100	63	29	62	<0.2	<5
52.88	55.78	2.90	F	BRBS	broken breccia basalt "aphanitic"										
55.78	58.10	2.32	F	BRBS	breccia basalt "aphanitic"										
58.10	62.70	4.60	F	MSBS	massive basalt "grainy"										
62.7	64.62	1.92	F	BRBS	breccia basalt "aphanitic"										
64.62	72.90	8.28	F	CAVN	calcite veined basaltic gouge										
72.90	47.80	1.90	T	BRBS	calcite veined breccia basalt "aphanitic"										
74.80	75.60	0.80	T	MSBS	calcite veined massive basalt "grainy"										
75.60	78.10	2.50	F	MSBS	massive basalt "grainy"										
						75.60	76.81	1.21	N111165	91	80	33	92	<0.2	<5
						76.81	78.10	1.29	N111166	97	76	26	176	<0.2	<5
78.10	81.00	2.90	F	BRBS	breccia basalt with pyrite "aphanitic"										
						78.10	79.60	1.50	N111167	86	823	36	1875	0.8	30
						79.60	81.00	1.40	N111168	90	122	41	600	<0.2	15
81.00	82.91	1.91	F	CAVN	calcite vein in basalt										
82.91	95.10	12.19	F	BRBS	broken breccia basalt "aphanitic"										
						91.14	92.81	1.67	N111169	53	267	30	496	0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-04 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						92.81	93.73	0.92	N111170	85	363	30	170	<0.2	<5
95.10	101.65	6.55	F	FBBS	faulted massive basalt "grainy"										
101.65	115.52	13.87	F	BRBS	very broken breccia basalt "aphanitic"										
						103.17	104.85	1.68	N111171	86	61	23	64	<0.2	<5
115.52	148.29	32.77	F	BRBS	broken and faulted breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-05 | Property: ICE | Section: 10,965 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Lee Pigage
376,690.26	6,862,476.49	1,246.15	66.45	Drilling Dates:	Aug 10-14, 1996

Depth	0.00	66.45	
Azimuth	306		
Dip	-50	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	2.15	0.32		OBDH	massive basalt rubble										
					-minor limonite staining	1.83	2.15	0.32	N111172	64	286	26	136	<0.2	
2.15	7.60	5.45	T	MSBS	massive basalt "grainy"										
					-limonite on fractures	2.15	3.10	0.95	N111173	65	450	45	170	<0.2	<5
						3.10	4.88	1.78	N111174	86	575	65	160	<0.2	<5
						4.88	6.10	1.22	N111175	93	585	40	135	<0.2	<5
						6.10	7.60	1.50	N111176	97	445	35	185	<0.2	<5
7.60	8.25	0.65	F	QZVN	quartz-epidote-chlorite vein										
						7.60	8.25	0.65	N111177	100	286	14	136	<0.2	
8.25	17.05	8.80	F	MSBS	massive basalt "grainy"										
						8.25	9.60	1.35	N111178	89	100	34	144	<0.2	
						9.60	10.36	0.76	N111179	100	64	32	116	<0.2	
						10.36	11.89	1.53	N111180	89	71	32	134	<0.2	
						11.89	13.41	1.52	N111181	100	66	43	278	<0.2	
						13.41	14.94	1.53	N111182	95	71	63	816	<0.2	
						14.94	16.10	1.16	N111183	87	68	42	334	<0.2	
						16.10	17.05	0.95	N111184	84	89	44	304	<0.2	
17.05	17.25	0.20	F	MSCH	green chert										
17.25	33.70	16.45	F	MSBS	massive basalt "grainy"										
33.70	34.90	1.20	F	MSBS	epidote altered massive basalt "grainy"										
34.90	46.45	11.55	F	MSBS	massive basalt "grainy"										
						34.90	36.27	1.37	N111185	91	92	41	180	<0.2	
						36.27	37.34	1.07	N111186	96	74	39	180	<0.2	
						37.34	38.86	1.52	N111187	97	60	80	800	<0.2	
						38.86	40.23	1.37	N111188	73	94	78	664	<0.2	
						40.23	41.15	0.92	N111189	55	59	42	178	<0.2	
						41.15	42.06	0.91	N111190	100	56	55	336	<0.2	
						42.06	42.67	0.61	N111191	100	59	42	152	<0.2	
						42.67	43.89	1.22	N111192	95	48	61	394	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-05 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
46.45	48.46	2.01	F	BRBS	veined breccia basalt "aphanitic"										
					-quartz-epidote veins										
48.46	55.30	6.84	F	BRBS	breccia basalt "aphanitic"										
						54.61	55.89	1.28	N111193	100	108	33	142	<0.2	
55.30	60.05	4.75	F	BRBS	altered breccia basalt "aphanitic"										
					-sericite alteration	55.89	56.45	0.56	N111194	89	177	31	404	<0.2	
						56.45	58.00	1.55	N111195	88	214	37	144	0.2	
						58.00	58.77	0.77	N111196	100	260	34	126	<0.2	
						58.97	60.05	1.08	N111197	77	52	25	70	0.2	
60.05	64.20	4.15	F	BRBS	breccia basalt with massive basalt										
					-sericite alteration "aphanitic/grainy"	60.05	61.20	1.15	N111198	91	66	32	246	0.2	
64.20	66.45	2.25	F	CBMS	black chert and mudstone										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-06 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Lee Pigage
376,709.01	6,862,595.56	1,275.73	92.66	Drilling Dates:	Aug 15-17, 1996

Depth	0.00	92.66	
Azimuth	304	304	
Dip	-50	-53	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	17.48	15.04	T	BRBS	breccia basalt "aphanitic"										
					-strong limonite staining on fracture surfaces	2.44	3.85	1.41	N111199	50	0.15 %	27	132	<0.2	
					-locally minor malachite on fracture surfaces	3.85	5.33	1.48	N111200	46	0.16 %	36	200	<0.2	
						5.33	6.10	0.77	N111251	100	0.24 %	43	278	<0.2	
						6.10	7.32	1.22	N111252	86	0.23 %	35	286	0.2	
						7.32	8.21	0.89	N111253	100	0.25 %	46	308	<0.2	
						8.21	9.34	1.13	N111254	88	0.39 %	45	436	0.2	
						9.34	10.36	1.02	N111255	72	0.30 %	59	458	0.2	
						10.36	11.25	0.89	N111256	100	0.22 %	43	282	<0.2	
						11.25	12.69	1.44	N111257	85	0.39 %	48	422	0.2	
						12.69	13.85	1.16	N111258	100	0.17 %	24	116	0.2	
						13.85	14.94	1.09	N111259	94	0.18 %	26	134	<0.2	
						14.94	16.46	1.52	N111260	93	0.28 %	29	124	<0.2	
						16.46	17.48	1.02	N111261	86	0.38 %	28	160	0.2	
17.48	21.34	3.86	S	BRBS	breccia basalt "aphanitic"										
					-weathered	17.48	18.50	1.02	N111262	91	0.69 %	22	130	0.2	
					-abundant malachite on fractures	18.50	19.51	1.01	N111263	100	0.97 %	33	214	<0.2	
						19.51	20.50	0.99	N111264	88	2.92 %	32	310	<0.2	
						20.50	21.34	0.84	N111265	95	2.98 %	24	294	<0.2	
21.34	22.00	0.66	S	QZVN	milky quartz vein										
					-trace malachite on fractures	21.34	22.00	0.66	N111266	96	1.07 %	16	172	<0.2	
22.00	24.60	2.60	S	BRBS	breccia basalt "aphanitic"										
					-abundant red cuprite on fractures	22.00	22.60	0.60	N111267	100	2.47 %	33	214	0.2	
					-trace native copper on fractures	22.60	23.77	1.17	N111268	90	1.37 %	35	190	0.2	
						23.77	24.60	0.83	N111269	91	1.14 %	40	262	<0.2	
24.60	25.45	0.85	S	BRBS	breccia basalt "aphanitic"										
					-abundant cuprite and trace native copper on fractures	24.60	25.45	0.85	N111270	95	1.78 %	40	336	<0.2	
25.45	26.40	0.95	S	GGBS	gouged breccia basalt										
						25.45	26.40	0.95	N111271	69	5.15 %	209	5480	<0.2	
26.40	28.30	1.90	T	BRBS	breccia basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-06 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						26.40	27.13	0.73	N111272	95	0.40%	70	1420	<0.2	
						27.13	28.30	1.17	N111273	79	159	57	906	<0.2	
28.30	41.40	13.10	F	BRBS	breccia basalt "aphanitic"										
					-no copper minerals noted	28.30	28.96	0.66	N111274	100	127	42	286	0.2	
						28.96	30.48	1.52	N111275	100	78	32	164	0.2	
						30.48	31.70	1.22	N111276	83	93	32	164	<0.2	
						31.70	32.92	1.22	N111277	85	83	29	114	<0.2	
41.40	43.30	1.90	F	PHBS	porphyritic basalt "aphanitic/grainy"										
43.30	66.84	23.54	F	BRBS	breccia basalt "aphanitic"										
66.84	72.53	5.69	F	MSBS	massive basalt "grainy"										
72.53	80.87	8.34	F	BRBS	breccia basalt "aphanitic"										
						72.53	73.96	1.43	N111278	85	n/a	28	72	0.2	
						75.90	77.42	1.52	N111279	86	n/a	25	72	<0.2	
80.87	92.66	11.79	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-07 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Lee Pigage
376,750.41	6,862,556.72	1,262.21	53.34	Drilling Dates:	August 19-21, 1996

Depth	0.00	45.72
Azimuth	320	320
Dip	-50	-49
Method	Brunton	Acid

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	6.40	4.57		OBDH	overburden										
						1.83	3.66	1.83	N111280	5	76	24	70	<0.2	
						3.66	5.49	1.83	N111281	5	78	25	58	<0.2	
						5.49	6.40	0.91	N111282	17	64	25	66	<0.2	
6.40	13.05	6.65	F	BRBS	breccia basalt										
					-no limonite on surface	6.40	7.77	1.37	N111283	60	72	27	72	<0.2	
						7.77	9.14	1.37	N111284	25	59	28	70	<0.2	
						9.14	10.36	1.22	N111285	85	77	33	82	<0.2	
						10.36	11.89	1.53	N111286	84	74	31	74	<0.2	
13.05	17.00	3.95	F	BRBS	foliated breccia basalt										
17.00	29.10	12.10	F	BRBS	breccia basalt										
29.10	30.40	1.30	F	BRBS	breccia basalt										
						29.53	30.70	1.17	N111287	91	49	30	80	<0.2	
30.40	53.34	22.94	F	BRBS	foliated breccia basalt										
						40.84	42.37	1.53	N111288	95	69	28	74	<0.2	
						52.43	53.34	0.91	N111289	100	77	28	80	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-08 | Property: ICE | Section: 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,631.86	6,862,646.43	1,286.06	74.37	Drilling Dates:	Aug 22-25, 1996

Depth	0.00	73.15	
Azimuth			
Dip	90	-89	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.50	3.50		CSDH	casing										
3.50	4.27	0.77		OBDH	overburden										
4.27	12.30	8.03	T	MSBS	massive basalt "grainy"										
						4.50	6.50	2.00	N111299	10	355	30	160	<0.2	<5
						6.50	8.20	1.70	N111300	12	910	40	330	<0.2	<5
						8.20	10.00	1.80	N110951	6	800	35	215	<0.2	<5
						10.00	12.30	2.30	N110952	12	870	30	185	<0.2	<5
12.30	14.94	2.64	S	BRBS	breccia basalt, rusted "aphanitic"										
						12.30	13.41	1.11	N110953	62	0.25%	55	910	<0.2	<5
						13.41	14.94	1.53	N110954	98	0.42%	60	950	<0.2	<5
14.94	16.92	1.98	S	GGBS	basaltic gouge "aphanitic"										
					-pyrite and limonite bands	14.94	16.92	1.98	N110955	28	0.39%	355	235	<0.2	20
16.92	18.60	1.68	T	BRBS	pyritic breccia basalt										
					-breccia clasts in a pyrite matrix	16.92	18.00	1.08	N110956	65	1.70%	450	195	<0.2	20
18.60	20.15	1.55	S	HEPY	hematitic pyrite										
					-chalcopyrite and chalcocite forming fine grained patches	18.00	19.02	1.02	N110957	100	2.06%	775	145	<0.2	20
					-hematite veins cut rock	19.02	20.30	1.28	N110958	85	4.99%	725	35	<0.2	20
					-tiny fractures contain hematite and chalcopyrite										
20.15	21.80	1.65	T	BRBS	breccia basalt "aphanitic"										
						20.30	21.80	1.50	N110959	85	2.35%	210	190	<0.2	10
21.80	24.08	2.28	S	HEPY	hematitic pyrite										
						21.80	22.90	1.10	N110960	84	1.99%	385	200	<0.2	30
						22.90	24.08	1.18	N110961	85	1.63%	640	105	<0.2	25
24.08	27.00	2.92	T	BRBS	breccia basalt "aphanitic"										
					-cuprite along fractures and in patches with limonite	24.08	25.60	1.52	N110962	95	2.63%	60	405	<0.2	10
						25.60	26.50	0.90	N110963	85	2.75%	55	500	<0.2	<5
						26.50	27.80	1.30	N110964	81	0.60%	100	2990	<0.2	<5
27.00	32.62	5.62	T	FBBS	faulted basalt "aphanitic"										
					-rare cuprite at the top of the interval	27.80	28.65	0.85	N110965	89	575	130	3530	<0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-08 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						28.65	31.09	2.44	N110966	33	110	65	1105	<0.2	<5
						31.09	32.62	1.53	N110967	69	80	60	205	<0.2	<5
32.62	46.93	14.31	F	SHBS	sheared basalt "aphanitic"										
46.93	74.37	27.44	F	MSBS	massive basalt "grainy"										
					-trace pyrite grains										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-09 | Property: ICE | Section: 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,631.86	6,862,646.43	1,286.06	74.37	Drilling Dates:	Aug. 26-30, 1996

Depth	0.00	73.15	
Azimuth	128	128	
Dip	-50	-50	
Method	NA	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.43	2.43		CSDH	casing										
2.43	20.73	18.30		OBDH	overburden, sand										
					-very poor recovery	2.43	5.49	3.06	N110251	10	762	40	286	0.8	
					-trace limonite on fractures	5.49	7.31	1.82	N110252	14	72	23	82	<0.2	
						7.31	10.36	3.05	N110253	7	71	20	76	<0.2	
						10.36	20.73	10.37	N110254	2	1410	22	214	0.2	
20.73	24.69	3.96	S	MSBS	massive basalt "aphanitic"										
					-limonite and trace malachite on fractures	20.73	24.69	3.96	N110255	9	0.89%	28	354	<0.2	<5
					-trace native copper										
24.69	27.83	3.14	S	BRBS	breccia basalt "aphanitic"										
					-limonite and hematite on fractures	24.69	25.95	1.26	N110256	94	1.82%	50	585	<0.2	<5
					-trace malachite on fractures	25.95	27.83	1.88	N110257	73	0.58%	40	535	<0.2	15
27.83	29.87	2.04	S	BRBS	breccia basalt with fault "aphanitic"										
					-limonite and hematite on fractures	27.83	28.65	0.82	N110258	100	0.70%	40	520	<0.2	<5
					-moderate chalcocite on fractures	28.65	29.87	1.22	N110259	100	0.50%	40	350	<0.2	<5
29.87	32.35	2.48	S	HEPY	hematitic pyrite "aphanitic"										
					-massive pyrite (35-40 %)	29.87	30.95	1.08	N110260	80	0.99%	320	365	1.0	100
					-minor chalcopyrite and chalcocite	30.95	32.35	1.40	N110261	74	1.72%	690	290	1.0	25
					-hematite occurs as clasts and matrix										
					-limonite and hematite along fractures										
32.35	39.55	7.20	T	BRBS	breccia basalt "aphanitic"										
					-trace limonite on fractures	32.35	33.22	0.87	N110262	90	0.83 %	82	316	<0.2	
					-rare hematite	33.22	34.75	1.53	N110263	90	1.22 %	68	244	<0.2	
						34.75	36.27	1.52	N110264	83	1.41 %	69	206	0.2	
						36.27	37.79	1.52	N110265	.93	1.52 %	84	208	0.4	
						37.79	39.55	1.76	N110266	81	1.18 %	90	176	0.2	
39.55	40.84	1.29	S	HEPY	hematitic pyrite										
					-mainly pyrite, with chalcopyrite and chalcocite	39.55	40.84	1.29	N110267	81	1.64%	1015	335	1.0	70
40.84	41.80	0.96	T	GGBS	brecciated basalt "grainy"										
						40.84	42.00	1.16	N110268	87	1.69%	535	390	<0.2	30

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-09 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
41.80	43.50	1.70	S	HEPY	hematitic pyrite										
					-massive pyrite (30-35 %)	42.00	43.50	1.50	N110276	82	2.18%	645	180	1.0	40
					-minor chalcopyrite (10-12%) and chalcocite										
					-hematite occurs as clasts, infilling and along fractures										
					-limonite and jarosite along fractures										
43.50	46.60	3.10	S	BRBS	breccia basalt "grainy"										
					-trace limonite and hematite along fractures	43.50	45.42	1.92	N110269	73	0.71%	35	890	<0.2	<5
						45.42	46.94	1.52	N110270	90	1.05%	85	610	<0.2	25
46.60	47.44	0.84	S	HEPY	hematitic pyrite										
					-massive pyrite (50-60%)	46.94	48.00	1.06	N110271	84	1.01%	71	688	1.2	25
					-minor chalcopyrite and chalcocite										
47.44	54.30	6.86	T	GGBS	gouged basalt										
					-gouged basalt with limonite and hematite on fractures	48.00	49.23	1.23	N110272	63	1.64%	70	900	1.2	30
						49.23	50.90	1.67	N110273	70	0.91%	67	3740	0.4	25
						50.90	53.04	2.14	N110274	43	0.39%	64	2750	0.2	<5
						53.04	54.50	1.46	N110275	91	0.02%	215	180	<0.2	<5
54.50	69.80	15.30	F	BRBS	breccia basalt "aphanitic"										
					-common quartz veins with some hematite	54.50	55.93	1.43	N110277	85	257	136	3040	0.2	
						55.93	57.91	1.98	N110278	68	319	137	2710	<0.2	
69.80	74.37	4.57	F	MSBS	massive basalt "grainy/aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC96-10	Property:	ICE	Section:	10,500 N			
						Depth	0.00	83.52
						Azimuth	165	
Easting:	Northing:	Elevation:	Depth:	Logger:	Lee Pigage	Dip	-51	-47.00
375,995.00	6,862,395.00	1,240.00	83.52	Drilling Dates:	Aug 31-Sep 6, 1996	Method	Brunton	Acid

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	15.24	15.24	F	MSBS	broken massive basalt "grainy"										
						3.66	4.42	0.76	N110279	83	80	21	46	<0.2	
						4.42	6.90	2.48	N110280	44	75	22	44	<0.2	
						6.90	8.53	1.63	N110281	85	66	24	70	<0.2	
						8.53	10.21	1.68	N110282	91	65	23	74	<0.2	
15.24	82.32	67.08	F	MSBS	massive basalt "grainy"										
82.32	83.52	1.20	F	MSBS	broken massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-11 | Property: Ice | Section: 10,700 N | Logger: Bryan Gay | Drilling Dates: Sept 7-10, 1996

	Easting:	Northing:	Elevation:	Depth:
	376,310.62	6,862,387.85	1,237.68	77.72

Depth	0.00	77.72	
Azimuth	300	300	
Dip	-51	-52	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.02	3.02		OBDH	overburden											
3.02	8.00	4.98	T	MSBS	massive basalt	"grainy"										
							3.66	5.18	1.52	N110295	68	65	25	72	<0.2	
							5.18	6.71	1.53	N110296	86	68	26	76	<0.2	
							6.71	8.00	1.29	N110297	93	72	27	76	<0.2	
8.00	10.47	2.47	F	MSBS	massive basalt	"grainy"										
10.47	20.79	10.32	F	MSBS	calcareous massive basalt	"grainy"										
20.79	33.22	12.43	F	MSBS	fractured massive basalt	"grainy"										
33.22	44.40	11.18	F	MSBS	fractured medium grained massive basalt	"grainy"										
44.40	72.85	28.45	F	MSBS	medium grained massive basalt	"grainy"										
							60.66	62.18	1.52	N110298	91	31	33	116	<0.2	
							62.18	63.70	1.52	N110299	89	14	28	104	<0.2	
72.85	77.72	4.87	F	MSBS	medium grained massive basalt	"grainy"										
					EOH											

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC96-12 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	L. Pigage
376,593.02	6,862,674.60	1,297.60	70.41	Drilling Dates:	Sept 11-13, 1996

Depth	0.00	70.41	
Azimuth	306		
Dip	-50	-50	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	9.14	9.14		CSDH	casing											
9.14	20.65	11.51	T	MSBS	massive basalt	"aphanitic"										
					-orange limonite on fractures		9.14	10.67	1.53	N110300	81	664	101	2600	<0.2	
					-minor hematite on fractures		10.67	11.89	1.22	N111354	57	190	99	2190	<0.2	
							11.89	13.72	1.83	N111355	100	272	89	1260	<0.2	
							13.72	14.94	1.22	N111356	92	79	46	214	<0.2	
							14.94	15.85	0.91	N111357	85	74	38	150	<0.2	
							15.85	17.07	1.22	N111358	75	61	122	1235	<0.2	
							17.07	18.59	1.52	N111359	78	76	41	276	<0.2	
							18.59	20.65	2.06	N111360	82	79	38	142	<0.2	
20.65	30.79	10.14	T	FBBS	basaltic fault breccia											
					-minor limonite on fractures		20.65	22.25	1.60	N111361	43	103	39	112	<0.2	
					-minor hematite on fractures		22.25	23.77	1.52	N111362	7	399	74	768	<0.2	
							23.77	24.99	1.22	N111363	22	0.15%	107	1630	<0.2	<5
							24.99	26.06	1.07	N111364	43	0.15%	165	1525	<0.2	<5
							26.06	27.43	1.37	N111365	40	0.35%	109	1030	<0.2	<5
							27.43	29.57	2.14	N111366	30	793	61	330	<0.2	
							29.57	30.79	1.22	N111367	61	180	41	122	<0.2	
30.79	40.70	9.91	F	MSBS	massive basalt	"grainy"										
					-minor patchy limonite on fractures											
40.70	42.80	2.10	T	MSBS	slightly weathered massive basalt	"grainy"										
					-limonite on fractures											
42.80	52.00	9.20	F	MSBS	massive basalt	"aphanitic"										
52.00	70.41	18.41	F	BRBS	breccia basalt	"aphanitic"										
					-hematite on fractures											
					EOH											

* S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-13 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,829.91	6,862,746.67	1,300.98	98.76	Tom Becker, Sefika Lesnikoff	Sept 12-16, 1996

	Depth	0.00	98.76
	Azimuth	315	315
	Dip	-48	-51
	Method	Brunton	Acid

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	6.27	5.05	T	MSBS	massive basalt "grainy"										
					-moderate limonite on fractures	4.27	5.79	1.52	N111368	66	73	30	88	<0.2	
6.27	8.34	2.07	T	HECH	hematitic chert										
						7.32	8.34	1.02	N111369	68	25	3	10	<0.2	
8.34	10.20	1.86		MSBS	massive basalt "grainy"										
10.20	13.49	3.29		FBBS	fault zone basalt										
					-strong limonite alteration	10.20	11.88	1.68	N111370	62	61	29	82	<0.2	
					-hematite coating on fracture surfaces	11.88	13.49	1.61	N111371	61	58	33	96	<0.2	
13.49	17.05	3.56		MSBS	massive basalt "grainy"										
					-strong limonite weathering on fracture surfaces	13.49	14.94	1.45	N111372	73	69	36	94	<0.2	
					-weak hematite weathering on fracture surfaces	14.94	16.46	1.52	N111373	84	73	37	98	<0.2	
						16.46	17.05	0.59	N111374	100	74	38	98	<0.2	
17.05	19.90	2.85		FBBS	fault zone basalt										
19.90	25.24	5.34	T	MSBS	massive basalt "grainy"										
					-rare limonite on fracture surfaces	24.08	25.24	1.16	N111375	91	79	40	110	<0.2	
25.24	30.02	4.78	T	BRBS	breccia basalt										
30.02	31.70	1.68	T	CRVN	brecciated carbonate vein										
						30.02	31.70	1.68	N111376	68	7	19	144	<0.2	
31.70	39.10	7.40	T	FBBS	faulted basalt and vein										
39.10	46.72	7.62	T	MSBS	massive basalt "grainy"										
						39.93	42.37	2.44	N111377	98	87	32	92	<0.2	
						42.37	43.89	1.52	N111378	84	109	69	1125	<0.2	
						43.89	45.42	1.53	N111379	81	0.12%	90	1025	<1	<5
						45.42	46.72	1.30	N111380	100	0.02%	85	1115	<1	<5
46.72	48.58	1.86	S	MSBS	fractured basalt "grainy"										
						46.72	47.40	0.68	N111381	88	0.43%	70	1325	<1	<5
						47.40	48.58	1.18	N111382	78	3.61%	50	705	<1	<5
48.58	50.50	1.65	T	BRBS	hematitic breccia basalt										
						48.58	49.99	1.41	N111383	72	2.90%	45	940	<1	30
50.50	51.25	0.75	T	HECH	hematitic chert										

SYNOPTIC LOG Hole: Hole: IC96-13 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						49.99	51.28	1.29	N111384	77	1.37%	30	400	5	70
51.25	52.50	0.25	T	PYMS	massive pyrite										
					-medium to fine grained massive pyrite	51.28	53.04	1.76	N111385	76	1.27%	145	890	9	270
52.50	52.90	0.40	T	BRBS	hematitic breccia basalt										
52.90	53.15	0.25	T	MSCH	massive chert										
53.15	55.80	2.65	T	PYMS	massive pyrite										
					-medium to fine grained massive pyrite	53.04	54.56	1.52	N111386	86	1.64%	430	1125	8	380
					-locally contains chalcopyrite along fractures	54.56	55.83	1.27	N111387	75	4.35%	805	520	12	425
55.80	57.03	0.74	S	BRBS	breccia basalt "aphanitic"										
						55.83	57.03	1.20	N111388	88	1.83%	45	660	1	40
57.03	63.70	6.67	T	PHBS	porphyritic breccia basalt										
						57.03	59.13	2.10	N111389	86	1915	116	3350	<0.2	
						59.13	60.66	1.53	N111390	85	1355	131	4230	<0.2	
						60.66	62.18	1.52	N111391	74	273	131	2600	<0.2	
						62.18	63.70	1.52	N111392	84	188	78	736	<0.2	
63.70	74.52	10.82	F	PHBS	porphyritic breccia basalt										
74.52	81.67	7.15	F	PHBS	porphyritic basalt										
81.67	98.76	17.09	F	MSBS	massive basalt										
						89.61	91.14	1.53	N111393	69	583	38	3340	1.4	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-14 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Lee Pigage
376,670.51	6,862,618.35	1,274.97	57.00	Drilling Dates:	Sept 14-17, 1996

Depth	0.00	57.00	
Azimuth	308	308	
Dip	-50	-48	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.90	2.90	S	OBDH	overburden										
					-limonite with open holes (weathered out sulphides?)	0.00	2.90	2.90	N111394	8	0.26 %	29	174	0.4	10
2.90	4.57	1.67	S	PYSM	*limonite boxwork*										
					-sulphides 30% weathered out as 1-2mm holes	2.90	4.57	1.67	N111395	32	0.56 %	84	346	2.4	30
4.57	8.20	3.63	S	BRBS	weathered breccia basalt "aphanitic"										
					-locally up to 20% pyrite	4.57	5.33	0.76	N111396	71	0.26 %	45	372	1.0	5
					-strongly weathered	5.33	6.71	1.38	N111397	68	0.94 %	121	384	1.2	15
						6.71	8.20	1.49	N111398	78	0.23 %	144	458	0.2	15
8.20	20.12	11.92	T	FBBS	basaltic fault zone "aphanitic"										
					-locally contains trace cuprite	8.20	8.83	0.63	N111399	26	0.40 %	89	510	0.4	5
						8.83	9.75	0.92	N111400	64	0.41 %	62	454	0.2	<5
						9.75	10.97	1.22	N111401	45	0.09 %	40	526	<0.2	<5
						10.97	12.19	1.22	N111402	57	0.91 %	42	440	0.2	<5
						12.19	14.17	1.98	N111403	35	0.57 %	24	232	<0.2	<5
						14.17	16.15	1.98	N111404	33	0.42 %	31	370	0.2	35
						16.15	17.37	1.22	N111405	47	2.04 %	41	692	<0.2	<5
						17.37	18.90	1.53	N111406	53	2.23 %	42	750	<0.2	<5
						18.90	20.12	1.22	N111407	42	1.69 %	39	286	0.2	<5
20.12	21.05	0.93	T	SSSG	hematite rich stringer zone										
					-dominated by maroon specular hematite	20.12	21.05	0.93	N111408	79	1.15 %	94	186	0.2	55
21.05	21.34	0.29	T	PYMS	massive pyrite										
					-medium grained, brassy pyrite with minor quartz gouge	21.05	21.34	0.29	N111409	69	3.72 %	518	2010	23.4	330
21.34	24.50	3.16	T	BRBS	breccia basalt "aphanitic"										
					-contains hematite pyrite stringers	21.34	23.16	1.82	N111410	52	1.93 %	137	798	5.0	40
					-matrix consists of pyrite disseminated in quartz	23.16	24.15	0.99	N111411	64	1.07 %	189	574	0.2	25
						24.15	24.50	0.84	N111412	48	1.37 %	289	388	<0.2	10
24.50	26.30	1.80	T	SSSG	stringer zone										
					-matrix of specular hematite-quartz-pyrite	24.50	26.30	1.31	N111413	77	3.43 %	386	820	0.2	45
26.30	27.50	1.20	T	PYMS	massive sulphides with breccia basalt "aphanitic"										
						26.30	28.96	2.66	N111414	46	0.73 %	438	246	0.8	20
27.50	28.96	1.46	T	BRBS	pyritic breccia basalt "aphanitic/grainy"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-14 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-intervals of pyrite with internal hematite-quartz veins										
28.96	34.44	5.48	T	BRBS	epidote altered breccia basalt "aphanitic"										
						28.96	29.65	0.69	N111415	100	1.08 %	41	872	0.2	<5
						29.65	31.09	1.44	N111416	56	0.53 %	45	780	<0.2	<5
						31.09	32.61	1.52	N111417	26	0.79 %	42	700	0.2	<5
						32.61	34.44	1.83	N111418	42	0.82 %	41	814	<0.2	<5
34.44	38.60	4.16	F	MSBS	massive basalt "grainy"										
						34.44	36.73	2.29	N111419	50	195	39	324	<0.2	
						36.73	38.86	2.13	N111420	72	109	46	378	<0.2	
38.60	43.80	5.00	F	BRBS	breccia basalt "aphanitic"										
						38.86	40.49	1.63	N111421	65	74	52	218	<0.2	
						40.49	43.28	2.79	N111422	72	73	30	84	<0.2	
43.80	57.00	13.40	F	BRBS	foliated breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-15 | **Property:** ICE | **Section:** 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	L. Pigage
376,725.28	6,862,718.90	1,290.60	89.61	Drilling Dates:	Sept 17-21, 1996

Depth	0.00	89.55	
Azimuth	308	308	
Dip	-50	-47	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.82	1.82		CSDH	casing										
1.82	7.32	7.32		OBDH	basaltic soil										
					-occasional malachite	1.82	7.32	5.50	N111423	15	2.03	42	584	<0.2	<5
7.32	10.36	3.04	T	PHBS	porphyritic basalt "aphanitic"										
						7.32	8.84	1.52	N111424	82	309	44	270	<0.2	
						8.84	10.36	1.52	N111425	81	125	42	218	<0.2	
10.36	13.07	2.71	S	FBBS	broken porphyritic basalt "aphanitic"										
					-minor limonite of fractures	10.36	11.89	1.53	N111426	5	131	40	130	<0.2	
					-minor hematite blotches	11.89	13.07	1.18	N111427	65	152	47	136	<0.2	
13.07	14.84	1.77	F	PHBS	porphyritic basalt "aphanitic"										
						13.07	14.84	1.77	N111428	93	530	44	144	<0.2	
14.84	19.00	4.16	T	FBBS	broken porphyritic basalt "aphanitic"										
						14.84	16.46	1.62	N111429	82	235	56	190	<0.2	
						16.46	17.98	1.52	N111430	68	241	91	350	<0.2	
						17.98	19.00	1.02	N111431	78	339	68	202	<0.2	
19.00	21.30	2.30	T	PHBS	porphyritic breccia basalt "aphanitic"										
						19.00	21.30	2.30	N111432	90	274	63	242	<0.2	
21.30	23.70	2.40	T	FBBS	broken porphyritic basalt "aphanitic"										
					-hematite common as matrix and veins	21.30	22.56	1.26	N111433	64	277	92	712	<0.2	
						22.56	23.25	0.69	N111434	72	117	62	220	<0.2	
23.70	26.90	3.20	T	PHBS	porphyritic breccia basalt "aphanitic"										
						23.25	24.40	1.15	N111435	100	561	59	308	<0.2	
						24.40	26.90	2.50	N111436	56	0.42%	92	582	<0.2	<5
26.90	27.25	0.35	T	GGBS	basaltic gouge										
						26.90	27.25	0.35	N111437	63	0.28%	131	640	1	35
27.25	29.20	1.95	T	PHBS	porphyritic breccia basalt "aphanitic"										
						27.25	28.65	1.40	N111438	40	559	118	568	<0.2	
29.20	30.28	1.08	T	BRBS	breccia basalt "aphanitic"										
					-hematite matrix	28.65	30.28	1.63	N111439	66	188	77	728	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
30.28	31.70	1.42	T	BRBS	epidote-altered breccia basalt "aphanitic"										
						30.28	31.70	1.42	N111440	77	141	59	340	<0.2	
31.70	45.67	13.97	F	BRBS	breccia basalt "aphanitic"										
					-minor calcite veining	31.70	33.22	1.52	N111441	90	156	42	190	<0.2	
						33.22	34.75	1.53	N111442	88	145	45	198	<0.2	
						34.75	36.27	1.52	N111443	76	220	53	330	<0.2	
						36.27	37.80	1.53	N111444	99	120	38	356	<0.2	
						37.80	39.32	1.52	N111445	89	205	40	406	<0.2	
						39.32	40.84	1.52	N111446	80	116	43	132	<0.2	
						40.84	42.37	1.53	N111447	95	81	38	114	<0.2	
						42.37	43.89	1.52	N111448	90	99	42	118	<0.2	
						43.89	45.67	1.78	N111449	98	87	43	136	<0.2	
45.67	46.25	0.58	T	GGBS	gouged basalt										
						45.67	46.25	0.58	N111450	90	302	44	208	<0.2	
46.25	47.14	0.89	T	MSBS	veined massive basalt "grainy"										
					-quartz and calcite veins	46.25	47.14	0.89	N111451	94	116	31	996	<0.2	
47.14	52.05	4.91	T	SGBS	weak stringer sulphides "aphanitic"										
					-matrix of semi-massive pyrite	47.14	48.46	1.32	N111452	70	0.10%	63	1035	<0.2	<5
						48.46	49.99	1.53	N111453	84	0.30%	156	976	1	10
						49.99	52.05	2.06	N111454	89	0.23%	57	872	3	80
52.05	58.30	6.25	T	BRBS	hematitic breccia basalt "aphanitic"										
						52.05	54.10	2.05	N111455	71	0.11%	53	718	<0.2	<5
						54.10	55.47	1.37	N111456	90	589	51	726	<0.2	
						55.47	57.00	1.53	N111457	82	125	33	258	<0.2	
						57.00	58.30	1.30	N111458	87	48	32	166	<0.2	
58.30	59.70	1.40	F	MSBS	calcite veined basalt "aphanitic"										
						58.30	59.70	1.40	N111459	64	406	51	898	1	
59.70	62.55	2.85	F	PHBS	porphyritic basalt "aphanitic"										
						59.70	61.57	1.87	N111460	96	158	36	248	<0.2	
						61.57	62.55	0.98	N111461	90	509	53	502	<0.2	
62.55	63.28	0.73	F	CAVN	calcite vein										
						62.55	63.28	0.73	N111462	89	47	23	86	<0.2	
63.28	69.80	6.52	T	BRBS	breccia basalt "aphanitic"										

S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-15 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						63.28	66.14	2.86	N111463	87	77	40	98	<0.2	
						66.14	68.28	2.14	N111464	94	75	42	108	<0.2	
						68.28	69.80	1.52	N111465	93	89	41	88	<0.2	
69.80	89.61	19.81	F	MSBS	massive basalt "grainy"										
						69.80	71.32	1.52	N111466	95	76	39	88	<0.2	
						71.32	74.37	3.05	N111467	92	83	34	84	<0.2	
						86.56	88.29	1.73	N111468	81	84	33	84	<0.2	
						88.29	89.61	1.32	N111469	92	77	36	98	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-16 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:
376,629.93	6,862,647.78	1,286.13	53.64

Logger: Sefika Lesnikoff
Drilling Dates: Sept. 18-20, 1996

Depth	0.00	53.64	
Azimuth	308	308	
Dip	-50	-50	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	2.35	0.52		OBDH	sand										
2.35	6.40	4.05		BCDH	broken rubble and massive basalt										
					-jarosite and hematite common	3.66	5.64	1.98	N111470	30	0.09%	31	204	<0.2	
						5.64	6.40	0.76	N111471	88	0.10%	26	180	<0.2	
6.40	14.00	7.60	S	BRBS	breccia basalt "grainy"										
					-minor malachite and limonite	6.40	8.84	2.44	N111472	79	0.20%	39	340	<0.2	
					-rare azurite	8.84	10.67	1.83	N111473	78	0.24%	38	410	<0.2	
						10.67	12.50	1.83	N111474	86	0.22%	39	490	<0.2	
						12.50	13.72	1.22	N111475	100	0.36%	35	392	<0.2	
						13.72	15.85	2.13	N111476	93	0.37%	32	250	<0.2	
14.00	15.50	1.50	T	BRBS	breccia basalt with malachite "grainy"										
15.50	20.50	5.00	S	BRBS	breccia basalt "grainy"										
						15.85	18.15	2.30	N111477	84	0.43%	33	346	<0.2	<5
						18.15	20.42	2.27	N111478	44	0.25%	129	358	0.4	35
20.50	23.55	3.05	S	HEPY	hematitic pyrite										
					-minor chalcocite veining	20.42	22.10	1.68	N111479	97	0.66%	336	400	1.4	130
					-limonite on fractures	22.10	23.77	1.67	N111480	59	0.81%	199	530	0.2	50
23.55	28.65	5.10	T	BRBS	breccia basalt "grainy"										
						23.77	26.21	2.44	N111481	87	2.12%	154	290	0.4	30
						26.21	27.58	1.37	N111482	91	2.40%	113	386	0.4	20
						27.58	28.96	1.38	N111483	93	1.95%	92	2300	<0.2	
28.65	31.40	2.75	T	FBBS	faulted basalt										
						28.96	30.75	1.79	N111484	80	0.26%	260	6370	<0.2	
						30.75	32.00	1.25	N111485	99	0.20%	119	1320	<0.2	
31.40	53.64	22.24	F	MSBS	massive basalt "grainy"										
						32.00	33.07	1.07	N111486	89	146	66	732	<0.2	
						33.07	34.14	1.07	N111597	89	76	29	82	<0.2	
						34.14	35.51	1.37	N111598	95	71	26	74	0.2	
						35.51	37.03	1.52	N111599	99	73	28	74	<0.2	
						37.03	38.56	1.53	N111600	99	73	26	68	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-16 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						38.56	39.93	1.37	N111601	99	65	27	74	<0.2	
						39.93	40.84	0.91	N111602	70	68	30	78	0.2	
						40.84	42.75	1.91	N111603	66	72	27	76	0.2	
						42.75	43.65	0.90	N111604	100	69	27	70	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC96-17 Property: ICE Section: 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	L. Pigage
376,576.68	6,862,564.15	1,272.05	64.62	Drilling Dates:	Sept 21-23, 1996

Depth	0.00	64.62	
Azimuth	308	308	
Dip	-50	-48	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	12.00	10.78	T	BRBS	breccia basalt "aphanitic"										
					-limonite, hematite and malachite common on fractures	1.22	3.51	2.29	N111487	82	0.21%	32	204	<0.2	<5
					- minor magnetite	3.51	5.79	2.28	N111488	100	0.24%	34	186	<0.2	<5
						5.79	8.23	2.44	N111489	92	0.42%	49	436	<0.2	<5
						8.23	9.75	1.52	N111490	99	0.35%	45	294	<0.2	<5
						9.75	12.00	2.25	N111491	99	0.21%	33	148	<0.2	<5
12.00	22.00	10.00	T	BRBS	weathered breccia basalt "aphanitic"										
					-limonite and hematite common on fractures	12.00	14.48	2.48	N111492	92	0.35%	53	358	<0.2	<5
					-malachite patches common on fractures	14.48	17.07	2.59	N111493	70	0.21%	36	212	<0.2	<5
						17.07	18.59	1.52	N111494	88	0.53%	48	440	<0.2	<5
						18.59	20.12	1.53	N111495	99	0.34%	50	562	<0.2	<5
						20.12	22.00	1.88	N111496	100	0.28%	91	1325	<0.2	<5
22.00	23.32	1.32	S	GGBS	fault gouge										
					-limonitic	22.00	23.32	1.32	N111497	64	1.61%	155	3330	0.2	<5
23.32	29.57	6.25	T	BRBS	foliated breccia basalt "aphanitic"										
					-minor hematite on fractures	23.32	24.99	1.67	N111498	87	0.19%	113	1630	<0.2	<5
						24.99	26.52	1.53	N111499	94	0.17%	91	714	<0.2	<5
						26.52	28.04	1.52	N111500	93	83	62	276	<0.2	
						28.04	29.57	1.53	N111501	94	70	67	516	0.2	
29.57	44.20	14.63	T	BRBS	weakly weathered breccia basalt "aphanitic"										
44.20	61.72	17.52	F	BRBS	breccia basalt "aphanitic"										
61.72	64.62	2.90	F	PHBS	chloritic breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-18 | **Property:** ICE | **Section:** 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	L. Pigage
376,688.57	6,862,726.41	1,296.05	77.42	Drilling Dates:	Sept 22-25, 1996

Depth	0.00	77.42	
Azimuth	305	305	
Dip	-50	-49	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	4.88	4.88		CSDH	casing										
						0.00	9.45	9.45	N111502	8	776	31	212	1.2	
4.88	14.02	9.14		OBDH	basalt bubble										
					-rubble and re-drilled core pebbles	9.45	14.02	4.57	N111503	11	0.14%	31	550	0.6	<5
14.02	27.03	13.01	T	PHBSp	porphyritic breccia basalt "aphanitic"										
					-occasional pyrite grains and limonite	14.02	16.16	2.14	N111504	56	0.13%	28	652	0.2	15
						16.16	17.98	1.82	N111505	80	0.14%	36	864	0.2	15
						17.98	19.51	1.53	N111506	84	0.65%	55	458	2.8	40
						19.51	21.22	1.71	N111507	80	0.28%	44	622	1.0	25
						21.22	22.56	1.34	N111508	96	0.40%	42	538	0.8	60
						22.56	24.22	1.66	N111509	100	0.36%	37	494	0.6	30
						24.22	25.60	1.38	N111510	99	0.27%	40	822	0.2	15
						25.60	27.03	1.43	N111511	98	0.25%	41	1010	<0.2	10
27.03	29.70	2.67	T	SGBS	stringer sulphides "aphanitic"										
					-matrix of chlorite and pyrite ● hematite	27.03	28.65	1.62	N111512	100	1.18%	58	946	1.6	90
						28.65	29.70	1.05	N111513	100	1.05%	58	530	1.4	80
29.70	30.24	0.54	T	PYMS	massive sulphide bands in breccia basalt										
						29.70	30.24	0.54	N111514	61	2.03%	177	202	4.4	160
30.24	34.75	4.51	T	PHBS	porphyritic breccia basalt "aphanitic"										
					-occasional weak hematite	30.24	32.31	2.07	N111515	89	0.19%	41	610	0.2	<5
						32.31	34.75	2.44	N111516	47	0.10%	42	518	0.6	<5
34.75	36.27	1.52	T	SGBS	stringer sulphides "aphanitic"										
					-disseminated pyrite	34.75	36.27	1.52	N111517	100	1.00%	190	790	1.0	15
36.27	42.15	5.88	T	SGBS	stringer sulphides "aphanitic"										
					-minor weak hematite staining	36.27	37.80	1.53	N111518	82	0.19%	70	788	<0.2	<5
						37.80	39.32	1.52	N111519	92	0.20%	71	1125	<0.2	<5
						39.32	40.84	1.52	N111520	97	0.09%	60	730	0.2	<5
						40.84	43.10	2.26	N111521	81	0.23%	64	1265	1.6	25
42.15	42.75	0.60	S	XXLI	ferricrete breccia basalt										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-18 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
42.75	54.56		T	SGBS	stringer sulphides	43.10	45.42	2.32	N111522	86	0.27%	88	1275	<0.2	<5
					-pyrite disseminations common	45.42	46.94	1.52	N111523	99	0.09%	43	804	0.6	10
					-occasional hematite veins	46.94	48.46	1.52	N111524	100	0.14%	49	826	0.8	10
						48.46	49.99	1.53	N111525	98	0.10%	63	874	0.4	<5
						49.99	51.51	1.52	N111526	97	0.29%	94	738	0.6	10
						51.51	53.04	1.53	N110223	93	105	34	370	<0.2	
						53.04	54.56	1.52	N110224	98	148	41	388	<0.2	
54.56	61.87	7.31	F	BRBS	breccia basalt "aphanitic"										
						54.56	56.08	1.52	N110225	99	84	27	102	<0.2	
						56.08	58.85	2.77	N110226	91	72	26	130	<0.2	
						58.85	60.35	1.50	N110227	93	154	27	228	<0.2	
						60.35	61.87	1.52	N110228	94	80	30	86	<0.2	
61.87	62.60	0.73	F	BRBS	epidote altered breccia basalt "aphanitic"										
						61.87	64.92	3.05	N110229	98	71	30	110	<0.2	
62.60	65.70	3.10	F	BRBS	breccia basalt "aphanitic"										
						64.92	66.45	1.53	N110230	99	107	34	112	<0.2	
65.70	68.37	2.67	F	BRBS	breccia basalt foliated "aphanitic"										
						66.45	68.37	1.92	N110231	82	79	31	156	<0.2	
68.37	69.90	1.53	T	FBBS	faulted breccia basalt "aphanitic"										
						68.37	69.90	1.53	N110232	99	79	77	642	<0.2	
69.90	73.50	3.60	F	BRBS	breccia basalt "aphanitic"										
						69.90	71.32	1.42	N110233	100	79	35	102	<0.2	
						71.32	73.50	2.18	N110234	92	81	29	76	<0.2	
73.50	77.42	3.92	F	MSBS	calcite veined massive basalt "grainy"										
					-quartz + calcite veins	73.50	74.37	0.87	N110235	80	28	19	54	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-19 | Property: ICE | Section: 10,700 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Bryan Gay
376,391.15	6,862,328.13	1,221.92	58.83	Drilling Dates:	Sept 24-26, 1996

Depth	0.00	58.83	
Azimuth	308		
Dip	-50	-49	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	5.18	3.35		OBDH	sand										
5.18	14.94	9.76		OBDH	overburden and massive basalt rubble										
						5.18	12.80	7.62	N111527	12	0.01%	14	118	<0.2	<5
						12.80	14.94	2.14	N111528	49	0.01%	30	104	<0.2	<5
14.94	29.70	14.76	T	MSBS	massive basalt "grainy"										
						14.94	16.76	1.82	N111529	81	75	29	72	<0.2	
						16.76	19.05	2.29	N111530	77	77	32	80	<0.2	
						19.05	21.95	2.90	N111531	71	61	35	102	<0.2	
						21.95	23.73	1.78	N111532	84	45	31	82	<0.2	
29.70	43.23	13.53	F	MSBS	fractured massive basalt "grainy"										
43.23	58.83	15.60	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-20 | **Property:** ICE | **Section:** 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,653.53	6,862,749.53	1,313.33	63.70	Tanja Reszat	Sept 26-30, 1996

Depth	0.00	63.70	
Azimuth	310		
Dip	-50	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	7.30	6.08	T	PHBS	porphyritic breccia basalt "aphanitic"										
					-hematite + limonite on all fractures	0.00	5.49	5.49	N111533	26	609	29	266	<0.2	
						5.49	7.30	1.81	N111534	69	0.15%	29	428	<0.2	<5
7.30	10.36	3.06	T	BRBS	breccia basalt "aphanitic"										
					-limonite on fractures	7.30	8.23	0.93	N111535	100	0.21%	31	426	<0.2	5
					-occasional malachite on fractures	8.23	10.36	2.13	N111536	44	0.28%	66	1050	<0.2	<5
10.36	11.89	1.53	S	GGBS	fault gouge basalt	10.36	13.41	3.05	N111537	55	0.39%	97	1830	<0.2	<5
					-limonite gouge material										
11.89	12.61	0.72	T	BRBS	breccia basalt "aphanitic"										
					-limonite and manganese on fractures										
12.61	14.06	1.45	T	PHBS	porphyritic breccia basalt "aphanitic"										
					-limonite on fractures										
					-occasional malachite on fractures										
14.06	15.64	1.58	S	GGBS	gouge and ferricrete										
						13.41	15.80	2.39	N111538	72	0.62%	71	1830	<0.2	<5
15.64	20.07	4.43	T	PHBS	porphyritic breccia basalt										
						15.80	17.37	1.57	N111539	100	0.37%	61	1190	<0.2	<5
						17.37	19.96	2.59	N111540	24	0.47%	59	878	<0.2	20
20.07	24.08	4.01	T	BRBS	breccia basalt "aphanitic"										
						19.96	21.96	2.00	N111541	64	0.46%	59	836	<0.2	<5
						21.96	24.08	2.12	N111542	83	0.17%	82	1535	<0.2	<5
24.08	37.50	13.42	T	SGBS	weak stringer sulphides										
						24.08	27.13	3.05	N111543	63	0.58%	35	778	1.6	30
						27.13	30.18	3.05	N111544	59	0.36%	102	550	0.6	10
						30.18	33.22	3.04	N111545	88	0.29%	80	420	0.6	15
						33.22	36.27	3.05	N111546	85	0.10%	48	514	<0.2	<5
						36.27	37.50	1.23	N111547	81	0.13%	60	494	<0.2	5
37.50	41.45	3.95	S	FBBS	fault breccia basalt										
					-trace amounts of cuprite staining	37.50	39.32	1.82	N111548	56	0.34%	54	1415	0.2	<5
						39.32	41.45	2.13	N111549	86	0.28%	77	1430	0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-20 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
41.45	48.20	6.75	T	BRBS	breccia basalt "aphanitic"										
					-moderate calcite veins	41.45	43.13	1.68	N111550	83	0.04%	43	682	<0.2	<5
						43.13	45.42	2.29	N110215	95	0.02%	28	454	0.4	<5
						45.42	48.20	2.78	N110216	38	0.22%	59	1535	3.8	100
48.20	51.10	2.90		SGBS	weak stringer sulphides "grainy"										
						48.20	49.99	1.79	N110217	93	0.45%	215	1465	1.0	25
						49.99	51.10	1.11	N110218	90	0.32%	104	1260	0.6	20
51.10	54.95	3.85	F	BRBS	poorly foliated breccia basalt "aphanitic"										
						51.10	52.73	1.63	N110219	100	128	38	194	<0.2	
						52.73	54.95	2.22	N110220	99	106	26	100	<0.2	
54.95	63.70	8.75	F	MSBS	massive basalt aphanitic/grainy"										
						54.95	56.82	1.87	N110221	70	87	27	98	<0.2	
						56.82	58.52	1.70	N110222	76	72	25	78	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC96-21 | Property: ICE | Section: 10,950 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,590.47	6,862,507.32	1,259.34	46.18	Bryan Gay	Sept 27-28, 1996

Depth	0.00	46.33	
Azimuth	312		
Dip	-50	-49	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	3.66	1.22		OBDH	gravelly overburden										
3.66	12.28	8.62	S	BRBS	limonitic breccia basalt "grainy"										
					-limonite, hematite, manganese oxide on all fractures	3.66	6.25	2.59	N111551	76	0.26%	18	150	<0.2	<5
						6.25	7.92	1.67	N111552	64	0.27%	20	154	<0.2	<5
						7.92	9.75	1.83	N111553	82	0.43%	29	162	<0.2	<5
						9.75	12.00	2.25	N111554	96	0.16%	27	170	<0.2	<5
12.28	13.00	0.72	S	FBCH	limonitic fault breccia										
					-strong hematite + limonite staining	12.00	14.32	2.32	N111555	76	0.15%	7	66	<0.2	<5
13.00	14.32	1.32	S	MSCH	fractured massive grey chert										
					-hematite, limonite on fractures										
14.32	15.85	1.53	T	CBMS	*laminated carbonaceous mudstone*										
					-hematite, limonite on fractures	14.32	15.85	1.53	N111556	43	0.14%	8	150	<0.2	<5
15.85	21.00	5.15	T	RBCH	fractured grey ribbon chert										
						15.85	18.49	5.15	N111557	28	0.11%	4	54	<0.2	<5
					-minor limonite on fractures	18.49	21.00	2.51	N111558	30	0.07%	12	128	<0.2	<5
21.00	23.01	2.01	T	CBMS	laminated carbonaceous mudstone										
					-minor limonite on fractures	21.00	23.01	2.01	N111559	46	0.08%	4	122	0.2	<5
23.01	27.84	4.83	S	RBCH	fractured grey ribbon chert										
					-limonite on fractures	23.01	24.69	1.68	N111560	68	0.20%	6	78	<0.2	<5
						24.69	25.60	0.91	N111561	74	376	4	68	<0.2	
						25.60	27.84	2.24	N111562	56.7	687	5	106	<0.2	
27.84	31.40	3.56	T	CBMS	black mudstone rubble										
						27.84	31.40	3.56	N111563	30	881	9	176	<0.2	
31.40	35.50	4.10	F	RBCH	green-grey ribbon chert										
					-limonite tension gashes										
35.50	46.18	10.68	F	RBCH	dark grey - black ribbon chert										
					calcite tension fractures										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-22 | Property: ICE | Section: 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	
376,532.93	6,862,596.54	1,284.98	44.50	Drilling Dates:	Sept 29-Oct 1, 1996

Depth	0.00	44.50	
Azimuth	308		
Dip	-50	-47	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	Casing										
1.22	6.10	4.88	F	MSBS	massive basalt "grainy"										
					-core rounded pebbles	4.60	4.70	0.10	N111564	100	177	5	94	<0.2	
						4.70	6.10	1.40	N111565	44	1310	47	318	<0.2	
6.10	7.77	1.67	S	GGBS	basaltic gouge										
						6.10	7.77	1.67	N111566	56	520	123	476	<0.2	
7.77	11.80	4.03	T	BRBS	breccia basalt "aphanitic"										
					-abundant limonite on fractures/weak limonite in rock	7.77	8.23	0.46	N111567	80	62	48	216	<0.2	
						8.23	10.06	1.83	N111568	100	199	64	250	<0.2	
						10.06	12.50	2.44	N111569	82	89	41	136	<0.2	
11.80	18.90	7.10	S	FBBS	basalt fault breccia										
					-core rubble with intervals of mud gouge	12.50	15.54	3.04	N111570	58	102	45	158	<0.2	
						15.54	17.68	2.14	N111571	92	66	35	92	<0.2	
						17.68	19.60	1.92	N111572	90	59	28	84	<0.2	
18.90	19.40	0.50	T	CAVN	brecciated calcite vein										
19.40	31.25	11.85	T	BRBS	breccia basalt										
					-limonite on fractures	19.60	21.64	2.04	N111573	34	70	39	116	<0.2	
						24.50	24.99	0.49	N111574	98	69	25	114	<0.2	
31.25	38.70	7.45	F	BRBS	breccia basalt "aphanitic"										
38.70	44.50	5.80	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-23 | Property: ICE | Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,615.91	6,862,780.76	1,330.43	104.85	T. Reszat	Oct 1-6, 1996

Depth	0.00	104.85	
Azimuth	307	307	
Dip	-50	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	10.00	8.17	T	BRBS	chloritic breccia basalt "aphanitic"										
						0.00	4.27	4.27	N111575	30	0.14 %	36	524	0.2	<5
						4.27	5.79	1.52	N111576	92	0.12 %	48	396	0.2	<5
						5.79	7.32	1.53	N111577	99	0.11 %	45	292	0.2	<5
						7.32	8.84	1.52	N111578	98	0.13 %	50	306	0.2	<5
						8.84	10.97	2.13	N111579	47	0.25 %	55	518	0.6	10
10.00	12.95	2.95	P	XXLI	*limonite after massive sulphides*										
					-extremely strong limonite and boxwork limonite after	10.97	12.95	1.98	N111580	57	0.37 %	43	602	1.4	25
					sulphides ?										
12.95	22.60	9.65	T	BRBS	breccia basalt "aphanitic"										
						12.95	14.94	1.99	N111581	68	0.33 %	49	886	0.4	10
						14.94	17.37	2.43	N111582	75	464	47	392	<0.2	
						17.37	19.00	1.63	N111583	94	90	35	118	<0.2	
						19.00	20.73	1.73	N111584	94	80	34	90	<0.2	
						20.73	22.60	1.87	N111585	100	84	33	116	<0.2	
22.60	36.73	14.13	T	FBBS	faulted breccia basalt "aphanitic"										
						22.60	25.91	3.31	N111586	92	74	39	118	<0.2	
36.73	45.57	8.84	T	FBBS	faulted massive basalt "grainy"										
45.57	62.68	17.11	F	MSBS	massive basalt "grainy"										
62.68	63.55	0.87	F	MSCH	massive red chert										
						62.68	63.55	0.87	N113719	92	62	16	62	<0.2	
63.55	72.45	8.90	F	MSBS	massive basalt "grainy"										
72.45	104.85	32.40	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC96-24 | **Property:** ICE | **Section:** 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,484.35	6,862,637.40	1,315.75	78.03	L. Pigage	Oct 2-6, 1996

Depth	0.00	78.03
Azimuth	305	305
Dip	-50	-49.00
Method	Brunton	Acid

From (m)	To (m)	Interval (m)	*	Unit	Comments
0.00	1.22	1.22		CSDH	casing
1.22	13.87	12.65	T	MSBS	massive basalt "grainy"
					-limonite on fractures
13.87	18.70	4.83	T	MSBS	massive basalt "aphanitic"
					-limonite on fractures
18.70	26.21	7.51	T	MSBS	rubbly massive basalt "aphanitic"
					-limonite on fractures, more weathered than unit above
26.21	32.00	5.79	T	MSBS	massive basalt "grainy"
					-limonite on fractures
32.00	36.27	4.27	S	MSBS	weathered massive basalt "grainy"
					-dark brown limonite staining throughout interval
36.27	45.44	9.17	T	MSBS	massive basalt aphanitic/grainy"
					-limonite staining on fractures
45.44	57.60	12.16	T	RBCH	dark grey ribbon chert
					-mixed ribbon chert (50%) and mudstone (50%)
					-siltstone interbed 54.05-54.16m
57.60	60.25	2.65	S	FBCH	brecciated ribbon chert
					-limonite stain on fractures and foliation surfaces
60.25	73.45	13.20	F	RBCH	grey ribbon chert
					-mudstone (70%) with ribbon chert interbeds (30%)
73.45	74.23	0.78	F	SCPH	sericite-chlorite phyllite
					-altered variant of unit immediately above (?)
74.23	76.90	2.67	F	GGMS	black mud gouge

From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.13	2.13	N111587	80	62	28	82	0.2	
2.13	4.42	2.29	N111588	86	57	25	82	0.2	
4.42	6.71	2.29	N111589	82	58	25	80	<0.2	
6.71	9.14	2.43	N111590	63	58	25	80	0.2	
9.14	11.43	2.29	N111591	93	61	25	88	0.2	
11.43	13.41	1.98	N111592	96	61	26	86	<0.2	
13.41	15.54	2.13	N111593	69	74	25	84	<0.2	
15.54	16.76	1.22	N111594	96	118	27	160	0.2	
16.76	18.70	1.94	N111595	89	84	28	150	<0.2	
18.70	21.03	2.33	N111596	58	170	26	634	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-24 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
76.90	78.03	1.13	F	RBCH	black ribbon chert										
					-chert with black carbonaceous partings										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-25 | **Property:** ICE | **Section:** 9,950 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,532.67	6,862,534.32	1,265.31	51.82	B. Gay	Oct 6-8, 1996

Depth	0.00	51.82	
Azimuth	308	308	
Dip	-90	-89	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	8.00	6.78		OBDH	overburden, mixed unit										
8.00	15.24	7.24	S	MSBS	fractured basalt "grainy"										
					-limonite + hematite on fractures	1.22	7.62	6.40	N111605	8	0.13 %	32	284	0.2	<5
						7.62	9.75	2.13	N111606	77	0.33 %	88	898	<0.2	<5
						9.75	11.58	1.83	N111607	76	0.34 %	72	750	0.2	<5
						11.58	15.24	3.66	N111608	20	0.35 %	56	642	<0.2	<5
15.24	16.78	1.54	S	GGBS	limonitic fault gouge										
					-strong orange limonite	15.24	16.78	1.54	N111609	26	0.38 %	100	982	<0.2	<5
16.78	18.90	2.12		LCDH	no recovery										
18.90	22.25	3.35	S	BRBS	chloritic breccia basalt "aphanitic"										
					-limonite + hematite on fractures	18.90	21.03	4.25	N111610	42	0.80 %	93	1075	<0.2	<5
					-occasional minor malachite on fractures	21.03	23.47	2.44	N111611	84	0.12 %	131	944	<0.2	<5
22.25	32.26	10.01	T	BRBS	chloritic breccia basalt "aphanitic"										
					-weak limonite + hematite on fractures	23.47	25.60	2.13	N111612	88	326	61	498	<0.2	
						25.60	27.43	1.83	N111613	97	122	48	374	<0.2	
						27.43	29.56	2.13	N111614	88	117	38	398	<0.2	
						29.56	32.26	2.70	N111615	97	87	36	364	<0.2	
32.26	34.75	2.49	S	GGBS	fault breccia + gouge										
					-pervasive limonite + hematite	32.26	34.75	2.49	N111616	100	77	45	186	<0.2	
34.75	39.12	4.37	T	FBBS	fault breccia + gouge										
					-weaker limonite + hematite than above	34.75	38.56	3.81	N111617	80	131	49	408	<0.2	
						38.56	41.15	2.59	N111618	80	60	20	116	<0.2	
39.12	41.15	2.03	T	GGMS	gouge and fault breccia										
41.15	44.20	3.05	T	BRCH	brecciated chert										
					-rare disseminated pyrite	41.15	42.06	0.91	N111619	99	51	13	100	<0.2	
						42.06	44.20	2.14	N111620	72	63	14	66	<0.2	
44.20	45.72	1.52		LCDH	no core recovered, possible fault										
45.72	51.82	6.10	F	RBCH	grey ribbon chert										
						45.72	47.24	3.04	N111621	95	46	6	44	<0.2	
						47.24	48.77	1.53	N111622	95	61	6	24	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-26 Property: ICE Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Tanja Reszat
376,580.23	6,862,809.87	1,350.50	56.39	Drilling Dates:	Oct 8-10, 1996

Depth	0.00	56.39	
Azimuth	308	308	
Dip	-50	-49	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	11.40	9.57	T	BRBS	breccia basalt "aphanitic"										
						0.00	5.49	5.49	N111623	36	72	20	66	<0.2	
						5.49	9.45	3.96	N111624	39	69	22	68	<0.2	40
						9.45	11.28	1.83	N111625	95	354	35	132	<0.2	20
11.40	14.02	2.62	P	XXLI	limonite with boxwork "grainy"										
					-the limonitic units appear to be weathered out sulphides	11.28	13.40	2.12	N111626	90	0.32%	57	448	2	
14.02	15.54	1.52	T	BRBS	breccia basalt "aphanitic"										
					-extensive limonite staining on fracture surfaces	13.40	15.54	2.14	N111627	91	0.21%	48	586	1	
15.54	20.72	5.18	T	PHBS	porphyritic basalt "grainy"										
					-5% phenocrysts in basalt	15.54	17.98	2.44	N111628	98	212	27	244	0	
						17.98	20.72	2.74	N111629	92	92	24	180	<0.2	
20.72	24.65	3.93	T	BRBS	breccia basalt "aphanitic"										
					-some areas contain minor phenocrysts	20.72	22.86	2.14	N111630	83	76	25	92	0	
						22.86	24.99	2.13	N111631	94	76	26	66	<0.2	
24.65	36.42	11.77	F	BRBS	breccia basalt "aphanitic"										
						24.99	26.52	1.53	N111632	78	78	25	52	<0.2	
						26.52	28.04	1.52	N111633	99	79	25	56	<0.2	
						28.04	29.57	1.53	N111634	97	63	21	42	<0.2	
36.42	56.39	19.97	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-27 | **Property:** ICE | **Section:** 10,950 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,533.16	6,862,533.94	1,265.10	46.33	B. Gay	Oct 9-10, 1996

Depth	0.00	46.33	
Azimuth	130	130	
Dip	-50	-49	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	24.09	22.26	S	BRBS	chloritic breccia basalt "aphanitic"										
					-strong limonite + hematite on fractures	1.83	3.96	2.13	N111635	65	0.13 %	30	362	0.2	<5
					-occasional malachite on fractures	3.96	5.49	1.53	N111636	58	0.10 %	19	368	0.8	<5
					-occasional cuprite on fractures	5.49	9.75	4.26	N111637	30	0.18 %	30	386	0.2	<5
						9.75	11.58	1.83	N111638	91	0.38 %	40	308	<0.2	<5
						11.58	14.33	2.75	N111639	55	0.14 %	25	154	<0.2	<5
						14.33	15.85	1.52	N111640	63	0.17 %	30	162	<0.2	<5
						15.85	18.90	3.05	N111641	86	0.25 %	34	244	<0.2	<5
						18.90	21.34	2.44	N111642	90	0.20 %	34	202	<0.2	<5
						21.34	23.25	1.91	N111643	94	0.15 %	64	494	<0.2	<5
24.09	27.85	3.76	S	FBBS	fault breccia + gouge "aphanitic"										
					-strong limonite and hematite on fractures	23.25	24.84	1.59	N111644	97	0.22 %	60	498	<0.2	<5
					-occasional malachite on fractures	24.84	26.82	1.98	N111645	99	0.38 %	67	542	<0.2	<5
						26.82	27.85	1.03	N111646	78	0.79 %	474	5240	<0.2	<5
27.85	32.25	4.40	T	BRBS	chloritic breccia basalt										
					-weak limonite and hematite on fractures	27.85	29.57	1.72	N111647	69	114	90	632	<0.2	
						29.57	30.94	1.37	N111648	94	71	38	152	<0.2	
						30.94	32.46	1.52	N111649	100	93	63	448	<0.2	
32.25	35.91	3.66	S	FBBS	fault breccia and gouge										
					-strong limonite and hematite	32.46	33.53	1.07	N111650	97	86	141	1260	<0.2	
						33.53	35.36	1.83	N111651	98	51	73	486	<0.2	
						35.36	37.19	1.83	N111652	95	54	56	66	<0.2	
35.91	42.88	6.97	F	FBBS	fault breccia and gouge										
					-as above but with no limonite or hematite	37.19	38.71	1.52	N111653	91	68	47	106	<0.2	
						38.71	40.84	2.13	N111654	87	63	36	150	<0.2	
						40.84	43.89	3.05	N111655	50	62	21	104	<0.2	
42.88	45.00	2.12	F	GGMS	carbonaceous mudstone gouge										
45.00	46.33	1.33	F	RBCH	carbonaceous ribbon chert										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-28 **Property:** ICE **Section:** 11,400 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,845.62	6,862,862.28	1,322.26	85.04	T.C. Becker	Oct 11-15, 1996

Depth	0.00
Azimuth	303
Dip	-50
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	5.18	3.96	S	MSBS	chloritic massive basalt "grainy"										
					-weak hematite on fractures	1.22	3.05	1.83	N111656	95	62	34	94	<0.2	
						3.05	5.18	2.13	N111657	95	59	39	118	<0.2	
5.18	8.45	3.27	S	FBBS	fault breccia basalt										
					-magnetic fault breccia + gouge	5.18	8.45	3.27	N111658	71	42	16	48	<0.2	
8.45	16.60	8.15	T	MSBS	chloritic massive basalt "grainy"										
					-weak limonite + hematite on fractures	8.45	11.28	2.83	N111659	85	70	33	102	<0.2	
						11.28	12.80	1.52	N111660	98	74	37	94	<0.2	
						12.80	14.33	1.53	N111661	100	71	35	98	<0.2	
						14.33	16.60	2.27	N111662	89	77	32	92	<0.2	
16.60	17.37	0.77	T	HECH	hematitic red chert										
					-strong limonite staining	16.60	18.90	2.30	N111663	91	93	19	74	<0.2	
17.37	18.70	1.33	T	MSBS	massive basalt										
18.70	39.20	20.50	T	MSBS	chloritic massive basalt "grainy"										
						18.90	20.42	1.52	N111664	99	64	33	106	<0.2	
						20.42	21.95	1.53	N111665	97	55	29	94	<0.2	
						21.95	23.47	1.52	N111666	93	62	28	88	<0.2	
39.20	40.00	0.80	F	HECH	hematitic red chert										
						39.20	40.00	0.80	N113755	100	28	9	26	<0.2	
40.00	57.00	17.00	F	MSBS	massive basalt "grainy"										
57.00	66.45	9.45	F	BRBS	breccia basalt "aphanitic"										
66.45	69.45	3.00	T	FBBS	fault breccia basalt - fragments in a calcite/quartz matrix										
69.45	70.71	1.26	F	BRBS	breccia baslt "aphanitic"										
70.71	72.61	1.90	F	MSBS	massive basalt "aphanitic"										
72.61	83.95	11.34	F	BRBS	breccia basalt "aphanitic"										
83.95	85.04	1.09	F	FBBS	fault breccia basalt - fragments in a calcite/quart matrix										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-29 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,789.47	6,862,775.33	1,308.71	65.84	T.C. Becker	Oct 12-15, 1996

Depth	0.00	65.84	
Azimuth	303	303	
Dip	-50	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	3.50	1.67	T	MSBS	chloritic massive basalt										
					-hematite on fractures	1.83	3.50	1.67	N111667	66	76	28	90	<0.2	
3.50	5.33	1.83	S	FBBS	fault breccia + gouge										
					-hematite + limonite on fractures	3.50	5.33	1.83	N111668	87	50	28	74	<0.2	
5.33	8.22	2.89	T	MSBS	chloritic massive basalt										
					-hematite + limonite on fractures	5.33	7.01	1.68	N111669	86	66	29	82	<0.2	
						7.01	8.22	1.21	N111670	76	67	26	78	<0.2	
8.22	15.85	7.63	S	FBBS	fault breccia + gouge										
					-strong hematite + limonite staining	8.22	10.21	1.99	N111671	90	78	26	94	<0.2	
						10.21	13.11	2.90	N111672	62	0.19%	66	978	<0.2	<5
						13.11	15.85	2.74	N111673	93	0.40%	70	1145	<0.2	<5
15.85	24.38	8.53	T	MSBS	fractured basalt										
					-hematite + limonite on fractures	15.85	17.75	1.90	N111674	97	0.17%	58	1030	<0.2	<5
					-cuprite on fractures	17.75	19.20	1.45	N111675	79	0.05%	37	354	<0.2	<5
					-rare native copper on fractures	19.20	20.73	1.53	N111676	86	0.30%	43	446	<0.2	<5
						20.73	21.95	1.22	N111677	82	0.95%	57	1240	<0.2	<5
						21.95	23.16	1.21	N111678	92	0.20%	29	272	<0.2	<5
						23.16	24.38	1.22	N111679	72	0.30%	36	514	<0.2	<5
24.38	25.70	1.32	S	FBBS	fault breccia + gouge										
					-limonite on fractures	24.38	25.70	1.32	N111680	55	1.04%	69	848	1.6	100
25.70	25.95	0.25	S	PYMS	brecciated massive pyrite										
					-hematite + limonite on fractures	25.70	26.97	1.27	N111681	85	1.99%	437	768	8.4	570
25.95	26.21	0.26	S	HEMS	hematitic mudstone										
26.21	26.97	0.76	S	PYMS	massive sulphides										
26.97	28.15	1.18	S	PHBS	porphyritic basalt										
					-hematite + limonite on fractures	26.97	28.15	1.18	N111682	56	0.89%	35	572	<0.2	10
28.15	44.75	16.60	T	PHBS	chloritic porphirytic basalt										
					-hematite + limonite on fractures	28.15	29.41	1.26	N111683	102	0.46%	70	1905	<0.2	<5
						29.41	30.94	1.53	N111684	93	0.09%	63	1380	<0.2	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-29 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						30.94	32.31	1.37	N111685	93	0.20%	54	788	<0.2	<5
						32.31	33.83	1.52	N111686	93	0.42%	60	860	<0.2	<5
						33.83	35.51	1.68	N111687	101	0.06%	36	270	<0.2	<5
						35.51	37.03	1.52	N111688	98	0.03%	33	140	<0.2	<5
						37.03	38.56	1.53	N111689	97	0.06%	39	260	<0.2	<5
						38.56	40.69	2.13	N111690	61	0.09%	46	528	<0.2	<5
						40.69	42.37	1.68	N111691	91	73	27	212	<0.2	
						42.37	44.75	2.38	N111692	92	79	34	276	<0.2	
44.75	48.20	3.45	T	PHBS	brecciated porphyritic basalt										
					-hematite + limonite on fractures	44.75	46.33	1.58	N111693	84	122	91	1845	<0.2	
						46.33	47.40	1.07	N111694	79	122	69	1155	<0.2	
						47.40	48.92	1.52	N111695	89	134	62	1390	<0.2	
48.20	53.00	4.80	T	BRBS	breccia basalt										
						48.92	50.44	1.52	N111696	99	90	24	92	<0.2	
						50.44	53.00	2.56	N111697	92	368	36	168	<0.2	
53.00	65.84	12.84	F	BRBS	magnetic breccia basalt										
						53.00	55.17	2.17	N111698	97	84	23	152	<0.2	
						55.17	56.85	1.68	N111699	93	80	22	212	<0.2	
						56.85	58.52	1.67	N111700	92	84	22	322	<0.2	
						58.52	60.05	1.53	N111701	101	384	33	1025	0.8	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-30 | Property: ICE | Section: 11,400 N

Easting:	Northing:	Elevation:	Depth:
376,907.72	6,862,814.40	1,298.28	82.30

Logger: L. Pigage
Drilling Dates: Oct 16-19, 1996

Depth	0.00	82.30	
Azimuth	315	315	
Dip	-49	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
					-core recovered	0.00	2.13	2.13	N111702	53	52	19	64	<0.2	
1.83	7.01	5.18	T	HECH	hematitic chert										
					-some intervals pink, pinkish green, or red	2.13	3.66	1.53	N111703	68	52	22	80	<0.2	
						3.66	5.18	1.52	N111704	63	70	28	140	<0.2	
						5.18	7.01	1.83	N111705	85	35	17	58	<0.2	
7.01	11.28	4.27	T	MSBS	massive basalt "grainy"										
					-limonite on fractures	7.01	9.14	2.13	N111706	79	58	27	172	<0.2	
						9.14	11.28	2.14	N111707	80	58	26	200	<0.2	
11.28	12.19	0.91	S	GGBS	limonitic basalt gouge										
					-strong limonite staining	11.28	12.19	0.91	N111708	84	64	30	112	<0.2	
12.19	18.90	6.71	T	MSBS	massive basalt "grainy"										
					-patchy limonite stain on fractures	12.19	14.33	2.14	N111709	91	46	24	88	<0.2	
						14.33	17.37	3.04	N111710	46	53	26	88	<0.2	
						17.37	18.90	1.53	N111711	94	57	22	78	<0.2	
18.90	32.61	13.71	F	MSBS	massive basalt "grainy"										
					-very fine grained	18.90	20.42	1.52	N111712	98	62	23	74	<0.2	
						20.42	21.95	1.53	N111713	97	57	24	76	<0.2	
						21.95	23.47	1.52	N111714	93	62	26	106	<0.2	
						23.47	24.99	1.52	N111715	94	61	28	108	<0.2	
						24.99	26.52	1.53	N111716	96	62	26	104	<0.2	
						26.52	28.04	1.52	N111717	99	59	27	100	<0.2	
						28.04	29.57	1.53	N111718	98	61	24	88	<0.2	
						29.57	31.09	1.52	N111719	92	64	25	96	<0.2	
						31.09	32.61	1.52	N111720	93	67	34	120	<0.2	
32.61	39.70	7.09	T	GGBS	basalt gouge and breccia										
						32.61	34.14	1.53	N111721	90	71	34	132	<0.2	
						34.14	35.66	1.52	N111722	87	16	16	88	<0.2	
						35.66	37.19	1.53	N111723	86	40	23	116	<0.2	
						37.19	39.70	2.51	N111724	92	31	23	106	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-30 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
39.70	45.40	5.70	T	MSBS	massive basalt "grainy"										
					-limonite on fractures	39.70	42.06	2.36	N111725	92	60	28	92	<0.2	
						42.06	44.20	2.14	N111726	84	59	30	96	<0.2	
45.40	46.10	0.70	F	GGBS	basalt gouge										
						44.20	46.10	1.90	N111727	100	57	33	106	<0.2	
46.10	47.09	0.99	F	HEMS	hematitic mudstone breccia										
					-tectonic breccia, cement is vein calcite	46.10	47.09	0.99	N111728	99	46	19	56	<0.2	
47.09	53.77	6.68	F	FBBS	basalt tectonic breccia "grainy"										
						47.09	48.16	1.07	N111729	87	64	35	104	<0.2	
						48.16	49.38	1.22	N111730	98	65	39	110	<0.2	
						49.38	51.05	1.67	N111731	91	60	31	84	<0.2	
						51.05	52.73	1.68	N111732	83	74	26	70	<0.2	
						52.73	53.77	1.04	N111733	99	0.04%	40	178	<0.2	<5
53.77	54.00	0.23	F	PYMS	massive pyrite										
					-fine to medium grained, dark brassy pyrite	53.77	54.00	0.23	N111734	96	1.69%	496	1225	11.8	600
54.00	55.66	1.66	F	MSBS	veined massive basalt "aphanitic"										
					-epidote-calcite-hematite veins	54.00	55.66	1.66	N111735	99	0.02%	31	84	<0.2	<5
55.66	82.30	26.64	F	BRBS	breccia basalt "aphanitic"										
					-moderately magnetic	55.66	57.45	1.79	N111736	84	83	31	82	<0.2	
						57.45	59.74	2.29	N111737	96	76	29	72	<0.2	
						59.74	61.57	3.35	N111738	56	88	25	72	<0.2	
						61.57	63.09	1.52	N111739	75	71	25	72	<0.2	
						63.09	64.62	1.53	N111740	91	77	27	72	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-31 **Property:** ICE **Section:** 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	T.C. Becker
376,750.00	6,862,805.51	1,323.25	61.57	Drilling Dates:	Oct 16-18, 1996

Depth	0.00	61.57	
Azimuth	308	308	
Dip	-49	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
						1.83	6.90	5.07	N111741	6	590	16	232	6	
1.83	6.71	4.88		BCDH	rounded rubble										
6.71	7.01	0.30		BCDH	redrilled rubble										
					-limonite, hematite on fractures	6.90	7.01	0.11	N111742	91	68	1	28	6	
7.01	28.04	21.03	T	PHBS	massive porphyritic basalt "aphanitic"										
					-limonite, hematite on fractures	7.01	9.75	2.74	N111743	55	1405	37	572	<0.2	
						9.75	12.04	2.29	N111744	100	1470	52	756	<0.2	
						12.04	14.33	2.29	N111745	93	1925	38	316	<0.2	
						14.33	17.37	3.04	N111746	87	136	26	70	<0.2	
						17.37	19.81	2.44	N111747	99	84	29	64	<0.2	
						19.81	21.64	1.83	N111748	96	90	27	62	<0.2	
						21.64	24.08	2.44	N111749	88	55	27	66	<0.2	
						24.08	25.76	1.68	N111750	97	111	30	112	<0.2	
						25.76	28.04	2.28	N111751	97	203	33	132	<0.2	
28.04	29.56	1.52	T	BRBS	magnetic breccia basalt "aphanitic"										
					-limonite, hematite on fractures	28.04	29.56	1.52	N111752	95	89	42	274	<0.2	
29.56	31.70	2.14	S	FBBS	fault breccia + gouge "aphanitic"										
					-strong limonite + hematite staining	29.56	31.70	2.14	N111753	85	2100	87	1255	<0.2	
31.70	37.19	5.49	F	BRBS	magnetic breccia basalt										
					-limonite, hematite on fractures	31.70	32.92	1.22	N111754	90	2110	67	1050	<0.2	
					-rare cuprite on fractures	32.92	34.14	1.22	N111755	97	115	33	102	<0.2	
					-rare disseminated pyrite on fractures	34.14	35.66	1.52	N111756	98	75	27	78	<0.2	
						35.66	37.19	1.53	N111757	100	77	29	78	<0.2	
37.19	40.23	3.06	T	BRBS	breccia basalt "aphanitic"										
						37.19	38.71	1.52	N111758	100	79	33	82	<0.2	
						38.71	40.23	1.52	N111759	99	93	32	74	<0.2	
40.23	45.75	5.52	T	MSBS	magnetic massive basalt										
						40.23	41.76	1.53	N111760	97	145	37	114	<0.2	
						41.76	43.28	1.52	N111761	99	65	28	80	<0.2	
						43.28	45.75	2.47	N111762	91	72	27	70	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-31 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
45.75	60.05	14.30	F	BRBS	magnetic breccia basalt "aphanitic"										
					-minor hematite veining	45.75	47.40	1.65	N111763	94	82	42	128	<0.2	
						47.40	48.92	1.52	N111764	95	100	49	186	<0.2	
						48.92	50.75	1.83	N111765	84	83	52	352	<0.2	
						50.75	52.27	1.52	N111766	99	83	38	82	<0.2	
						52.27	53.95	1.68	N111767	90	55	36	104	<0.2	
						53.95	55.17	1.22	N111768	92	60	34	76	<0.2	
						55.17	56.39	1.22	N111769	98	80	35	80	<0.2	
						56.39	57.91	1.52	N111770	99	64	37	90	<0.2	
						57.91	60.05	2.14	N111771	71	71	38	82	<0.2	
60.05	61.57	1.52	T	FBBS	chloritic fault breccia										
						60.05	61.57	1.52	N111772	72	86	36	72	<0.2	
					EOH										

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-32 **Property:** ICE **Section:** 11,400 N

Easting:	Northing:	Elevation:	Depth:
376,766.77	6,862,919.92	1,362.08	55.47

Logger: L. Pigage
Drilling Dates: Oct 19-22, 1996

Depth	0.00	55.47	
Azimuth	296	296	
Dip	-50	-48	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	7.30	5.47	T	MSBS	basalt rubble "grainy"										
					-trace malachite on fractures	1.83	3.66	1.83	N111773	97	89	42	96	<0.2	
					-limonite on fractures	3.66	5.49	1.83	N111774	98	82	42	94	<0.2	
						5.49	8.23	2.74	N111775	95	70	36	78	<0.2	
7.30	9.35	2.05	T	MSBS	-massive basalt "grainy"										
					-patchy limonite on fractures	8.23	9.75	1.52	N111776	100	70	32	78	<0.2	
9.35	10.60	1.25	T	GGBS	-basalt gouge										
10.60	11.43	0.83	T	MSBS	massive basalt "grainy"										
						9.75	12.80	3.05	N111777	48	0.01%	32	94	<0.2	<5
11.43	17.37	5.94	T	MSBS	massive basalt - rubbly core "grainy"										
					-cuprite on fractures	12.80	14.33	1.53	N111778	189	0.01%	30	86	<0.2	<5
					-limonite on fractures	14.33	15.85	1.52	N111779	71	0.01%	32	96	<0.2	<5
						15.85	17.37	1.52	N111780	100	0.01%	34	94	<0.2	<5
17.37	24.99	7.62	T	MSBS	veined massive basalt "grainy"										
					-minor cuprite on fractures	17.37	18.90	1.53	N111781	98	71	34	96	<0.2	
					-limonite on fractures	18.90	19.96	1.06	N111782	98	69	40	104	<0.2	
					-quartz-epidote-calcite±hematite±chlorite veins	19.96	21.49	1.53	N111783	98	64	47	110	<0.2	
						21.49	23.47	1.98	N111784	95	66	30	90	<0.2	
						23.47	24.99	1.52	N111785	100	83	33	84	<0.2	
24.99	27.30	2.31	F	BRBS	breccia basalt "aphanitic"										
					-patchy limonite on fractures, locally with cuprite	24.99	27.30	2.31	N111786	99	228	43	98	<0.2	
27.30	30.10	2.80	T	MSBS	massive basalt "grainy"										
					-limonite and cuprite on fractures	27.30	28.70	1.40	N111787	93	0.02%	31	94	<0.2	<5
						28.70	30.10	1.40	N111788	95	0.02%	46	686	<0.2	<5
30.10	30.50	0.40	F	HEMS	hematitic mudstone										
					-minor malachite on fractures	30.10	30.50	0.40	N111789	95	0.45%	89	546	3.8	365
30.50	35.66	5.16	T	BRBS	breccia basalt "aphanitic"										
					-patchy limonite and rare cuprite on fractures	30.50	32.61	2.11	N111790	98	261	38	124	<0.2	
						32.61	35.66	3.05	N111791	94	80	33	88	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-32 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
35.66	37.40	1.74	F	BRBS	veined breccia basalt "aphanitic"										
					-calcite-epidote-chlorite veins	35.66	37.95	2.29	N111792	94	103	36	80	<0.2	
37.40	41.76	4.36	T	FBBS	basalt tectonic breccia "aphanitic"										
					-patchy limonite on fractures	37.95	40.23	2.28	N111793	85	89	35	80	<0.2	
						40.23	41.76	1.53	N111794	89	85	36	74	<0.2	
41.76	47.20	5.44	F	BRBS	breccia basalt "aphanitic"										
						41.76	44.00	2.24	N111795	88	105	35	80	<0.2	
						44.00	46.33	2.33	N111796	94	90	30	68	<0.2	
47.20	55.47	8.27	F	BRBS	veined, altered breccia basalt "aphanitic"										
					-calcite-epidote-hematite veins	46.33	49.38	3.05	N111797	92	66	29	70	<0.2	
					-70% of interval altered basalt	49.38	52.43	3.05	N111798	94	72	28	68	<0.2	
						52.43	53.95	1.52	N111799	94	54	25	68	<0.2	
						53.95	55.47	1.52	N111800	97	78	31	74	1.0	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-33 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	T.C. Becker
376,710.32	6,862,834.55	1,337.09	56.08	Drilling Dates:	Oct 23-25, 1996

Depth	0.00	56.08			
Azimuth	310	310			
Dip	-50	-50			
Method	Brunton	Acid			

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
						1.83	3.66	1.83	N111801	81	72	25	78	<0.2	
1.83	22.50	20.67	T	MSBS	chloritic massive basalt "grainy"										
					-hematite + limonite on fractures	3.66	5.18	1.52	N111802	91	71	25	76	0.2	
					-rare chalcocite	5.18	7.62	2.44	N111803	72	77	24	78	<0.2	
						7.62	8.53	0.91	N111804	98	69	24	78	<0.2	
						8.53	10.97	2.44	N111805	94	70	23	74	<0.2	
						10.97	13.26	2.29	N111806	72	69	24	94	<0.2	
						13.26	14.78	1.52	N111807	86	57	26	90	<0.2	
						14.78	15.85	1.07	N111808	83	120	29	148	<0.2	
						15.85	16.50	0.65	N111809	69	2230	75	960	<0.2	
						16.50	17.37	0.87	N111810	80	480	37	298	<0.2	
						17.37	18.90	1.53	N111811	98	132	29	126	<0.2	
						18.90	20.42	1.52	N111812	99	81	28	124	<0.2	
						20.42	22.50	2.08	N111813	90	205	37	280	<0.2	
						22.50	24.99	2.49	N111814	100	67	24	64	<0.2	
22.50	33.60	11.10	T	PHBS	chloritic porphyry basalt "aphanitic"										
					-hematite + limonite on fractures	24.99	26.52	1.53	N111815	98	140	30	172	<0.2	
						26.52	28.04	1.52	N111816	99	93	26	74	<0.2	
						28.04	29.57	1.53	N111817	98	108	30	240	<0.2	
						29.57	30.78	1.21	N111818	91	77	22	50	0.4	
33.60	50.80	17.20	F	BRBS	magnetic breccia basalt "aphanitic"										
					-hematite + limonite on fractures										
50.80	56.08	5.28	F	FBBS	chloritic fault breccia + gouge										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC96-34 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:
376,869.61	6,862,714.70	1,287.82	114.91

Logger: S. Lesnikoff and T.C. Becker
Drilling Dates: Oct 23-26, 1996

Depth	0.00	114.91
Azimuth	305	305
Dip	-50	-48
Method	Brunton	Acid

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	3.65	1.82	T	MSBS	massive basalt "grainy"										
3.65	4.10	0.45	T	HECH	hematitic chert										
4.10	8.50	4.40	T	MSBS	massive basalt "grainy"	1.83	4.27	2.44	N111851	98	85	37	88	<0.2	
					-trace disseminated pyrite	4.27	5.79	1.52	N111852	96	76	35	88	<0.2	
						5.79	8.53	2.74	N111853	97	86	39	92	<0.2	
8.50	13.22	4.72	T	HECH	hematitic chert										
						8.53	13.41	4.88	N111854	28	24	12	24	<0.2	
13.22	15.25	2.03	T	MSBS	massive basalt "aphanitic"										
					-very fine grained chill margins	13.41	16.15	2.74	N111855	79	77	26	66	<0.2	
15.25	16.15	0.90	T	HEMS	hematitic mudstone										
16.15	71.00	54.85	F	MSBS	massive basalt "grainy"										
						63.70	65.23	1.53	N111856	98	78	32	76	<0.2	
						65.23	66.75	1.52	N111857	99	79	33	86	<0.2	
						66.75	68.25	1.50	N111858	100	84	32	82	<0.2	
						68.25	69.80	1.55	N111859	95	82	32	92	<0.2	
						69.80	72.10	2.30	N111860	56	74	36	106	<0.2	
71.00	72.10	1.10	F	HECH	hematitic chert										
72.10	73.20	1.10	F	PYMS	massive sulphides with hematitic chert										
					-20% brecciated hematitic chert	72.10	73.50	1.40	N111861	89	1.23%	0.08%	388	2	240
					-pyrite and chalcopyrite are dominant sulphides										
73.20	74.90	1.70	F	PYMS	massive pyrite										
					-medium to fine grained pyrite, fine grained pyrite	73.50	74.70	1.20	N111862	100	4.97%	0.07%	514	4	190
74.90	77.90	3.00	F	PYMS	massive sulphides with bornite										
					-pyrite, chalcopyrite, and bornite are dominant	74.70	76.10	1.40	N111863	88	12.40%	0.15%	470	62	480
						76.10	77.42	1.32	N111864	100	8.71%	0.13%	538	52	650
						77.42	78.94	1.52	N111865	95	5.06%	0.07%	2350	31	520
77.90	79.35	1.45	F	PYMS	-massive sulphides										
					-55% massive sulphides	78.94	80.47	1.53	N111866	96	9.17%	0.02%	756	50	400
					-45% basalt with hematitic chert										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC96-34 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
79.35	81.00	1.65	F	PYMS	massive sulphides with bornite										
					-pyrite, chalcopyrite, and ~20% bornite	80.47	81.99	1.52	N111867	98	3.45%	0.03%	430	21	540
					-trace sphalerite										
81.00	92.60	11.60	F	PYMS	massive sulphides										
					-contains pyrite, chalcopyrite, and bornite	81.99	83.52	1.53	N111868	98	3.84%	0.07%	392	38	1000
					-locally, clasts of hematitic chert	83.52	85.04	1.52	N111869	99	3.52%	0.05%	418	27	670
						85.04	86.56	1.52	N111870	100	3.67%	0.03%	1450	21	660
						86.56	88.09	1.53	N111871	99	4.47%	0.03%	6250	20	650
						88.09	89.61	1.52	N111872	100	3.03%	0.02%	9870	19	670
						89.61	91.14	1.53	N111873	97	3.88%	0.03%	3890	23	710
						91.14	92.66	1.52	N111874	98	6.06%	0.06%	914	36	880
92.60	92.93	0.33	F	HECH	hematitic chert, broken										
					-bands of pyrite and recrystallized chalcopyrite	92.66	94.18	1.52	N111875	99	2270	0	244	<0.2	
92.93	109.50	16.57	F	BRBS	porphyritic breccia basalt "aphanitic"										
					-minor sulphides near upper contact	94.18	95.71	1.53	N111876	99	3810	72	442	2	
						95.71	97.23	1.52	N111877	97	340	42	232	<0.2	
						97.23	98.76	1.53	N111878	98	139	26	120	<0.2	
						98.76	100.89	2.13	N111879	85	149	30	156	<0.2	
109.50	114.91	5.41	F	MSBS	massive basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97- 01 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,870.17	6,862,714.36	1,285.82	173.13m	Drilling Dates:	May 14-17, 1997

Depth	0.00	9.14	65.53	119.48	153.60
Azimuth	312	310	344	300	307.50
Dip	-75	-76	-73	-75	-75
Method	Brunton	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	8.40	5.35	F	MSBS	massive basalt "grainy"										
8.40	13.25	4.85	F	MSBS	veined massive basalt "grainy"										
					-calcite-quartz-epidote veins										
13.25	38.00	24.75	T	MSBS	basalt with hematitic mudstone interbeds "grainy"										
38.00	83.12	45.12	F	MSBS	massive basalt "grainy"										
					-minor epidote	78.64	80.16	1.52	N112551	100	95	40	120	<1	
						80.16	81.69	1.53	N112552	95	145	45	270	<1	
						81.69	83.12	1.43	N112553	91	70	45	300	<1	
83.12	91.09	7.97	F	PYMS	massive pyrite										
					-with splashy chalcopyrite	83.12	84.28	1.16	N112554	100	4.54 %	1015	5700	16	630
					-indistinctly bedded	84.28	85.80	1.52	N112555	100	2.16 %	920	14450	13	575
						85.80	86.56	0.76	N112556	104	1.75 %	760	1930	11	540
						86.56	88.09	1.53	N112557	100	2.10 %	1315	1105	16	610
						88.09	89.61	1.52	N112558	100	2.23 %	1070	2070	30	690
						89.61	91.09	1.48	N112559	97	2.11 %	820	1960	23	670
91.09	96.77	5.68	F	BRBS	breccia basalt "aphanitic"										
					-quartz-pyrite veins	91.09	92.66	1.57	N112560	90	230	35	135	<1	
					-quartz-calcite-epidote-chlorite veins	92.66	93.88	1.22	N112561	84	2300	100	475	1	
						93.88	95.40	1.52	N112562	97	605	70	670	<1	
						95.40	96.77	1.37	N112563	82	3020	120	1235	1	
96.77	122.83	26.06	F	PYSM	semi-massive sulphides										
					-mineralisation multigenerational	96.77	98.15	1.38	N112564	97	0.14 %	220	755	1	35
					-basalt fragments (5%)	98.15	98.76	0.61	N112565	82	0.08 %	180	1195	<1	35
					-quartz-specular hematite-pyrite matrix	98.76	100.28	1.52	N112566	97	0.09 %	220	190	1	25
					-irregular pyrite-quartz veins form network	100.28	101.80	1.52	N112567	98	0.42 %	165	1140	1	20
					-late quartz-epidote-pyrite veins	101.80	103.33	1.53	N112568	96	0.23 %	195	350	1	35
						103.33	104.85	1.52	N112569	100	0.19 %	165	700	1	85
						104.85	105.77	0.92	N112570	111	0.3 %	130	325	1	100
						105.77	107.14	1.37	N112571	94	0.79 %	270	1130	3	200
						107.14	107.90	0.76	N112572	92	0.54 %	180	1000	1	95

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						107.90	109.42	1.52	N112573	98	0.63 %	250	370	2	100
						109.42	110.95	1.53	N112574	99	0.72 %	250	605	2	110
						110.95	112.47	1.52	N112575	98	0.75 %	150	4470	1	80
						112.47	114.00	1.53	N112576	98	1.61 %	420	560	3	130
						114.00	115.52	1.52	N112577	97	1.21 %	290	910	2	65
						115.52	117.04	1.52	N112578	100	2.13 %	695	1200	4	70
						117.04	118.56	1.52	N112579	98	0.98 %	695	735	5	85
						118.56	120.09	1.53	N112580	100	0.97 %	415	605	2	45
						120.09	121.62	1.53	N112581	100	1.09 %	290	725	3	90
						121.62	122.83	1.21	N112582	99	2.65 %	275	2940	5	180
122.83	130.00	7.17	F	HEGS	hematitic stringers in breccia basalt										
					-with native copper	122.83	124.36	1.53	N112583	95	0.07 %	135	190	<1	10
					-dark green basalt fragments (20%)	124.36	125.88	1.52	N112584	96	0.06 %	135	205	1	10
					-matrix hematite-calcite-pyrite	125.88	127.41	1.53	N112585	92	0.00 %	95	145	<1	<5
						127.41	128.93	1.52	N112586	100	0.03 %	115	305	<1	5
						128.93	130.00	1.07	N112587	100	0.04 %	125	1340	<1	10
130.00	143.02	13.02	F	SSSG	stringer sulphides										
					-native copper in basalt fragments	130.00	130.91	0.91	N112588	88	0.4 %	185	2620	2	35
					-multigenerational mineralization	130.91	132.28	1.37	N112589	100	0.15 %	95	2250	1	40
					-interval similar to the massive sulphides from 96.77-122	132.28	133.81	1.53	N112590	97	0.11 %	95	1225	1	20
					-hematite-quartz-pyrite matrix	133.81	135.33	1.52	N112591	91	0.08 %	80	3320	1	25
					-quartz-pyrite sringers	135.33	136.86	1.53	N112592	88	0.09 %	80	1310	<1	10
					-minor quartz-chalcopyrite veins	136.86	138.38	1.52	N112593	96	0.07 %	85	290	<1	<5
						138.38	139.90	1.52	N112594	97	0.14 %	140	6830	1	140
						139.90	141.43	1.53	N112595	97	0.07 %	80	1215	<1	30
						141.43	143.02	1.59	N112596	96	0.31 %	85	2050	1	25
143.02	150.20	7.18	F	BRBS	breccia basalt "aphanitic"										
						143.02	144.17	1.15	N112597	89	235	45	575	<1	
						144.17	145.69	1.52	N112598	97	255	35	850	<1	
						145.69	147.07	1.38	N112599	100	175	40	275	<1	
150.20	171.15	20.95	F	BRBS	foliated breccia basalt "aphanitic"										
171.15	173.13	1.98	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-02 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,929.69	6,862,675.85	1,267.10	210.01m	Sefika Lesnikoff	May 17-22, 1997

Depth	0.00	33.53	94.18	176.48	208.48
Azimuth	310	311	315	311	315
Dip	-50	-51.00	-50	-48	-48
Method	Brunton	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	11.58	8.53	T	MSBS	fine grained massive basalt "grainy"										
11.58	12.56	0.98	F	HEMS	red-brown siliceous mudstone										
12.56	28.70	16.14	F	MSBS	fine grained massive basalt "grainy"										
28.70	29.50	0.80	F	MSCH	red and green massive chert										
29.50	42.02	12.52	F	MSBS	massive basalt "grainy"										
42.02	44.44	2.42	F	QZVN	quatrz-calcite-chlorite vein										
44.44	62.16	17.72	F	MSBS	fine grained massive basalt "grainy"										
62.16	69.80	7.64	F	MSBS	veined massive basalt "grainy"										
					-calcite-quartz-chlorite veins										
69.80	75.44	5.64	F	MSBS	massive basalt "grainy"										
75.44	82.50	7.06	F	BRBS	breccia basalt "aphanitic"										
						81.05	82.50	1.45	N112600	84	117	40	154	0	
82.50	83.80	1.30	F	HEMS	red brown hematitic mudstone										
						82.50	83.14	0.64	N111880	94	247	35	380	0	
						83.14	83.80	0.66	N111881	97	410	12	250	0	
83.80	88.41	4.61	F	PYMS	pyritic massive sulphides										
					-breccia with pyrite fragments	83.80	84.73	0.93	N111882	89	2.91 %	475	215	8	395
					-pyrite-quartz matrix	84.73	85.95	1.22	N111883	100	2.53 %	555	1045	9	490
					-pyrite as irregular interstitial grains	85.95	87.15	1.20	N111884	90	2.46 %	740	2520	12	620
						87.15	88.41	1.26	N111885	91	1.73 %	625	14180	10	530
88.41	106.75	18.34	F	PHBSm	porphyritic breccia basalt "aphanitic"										
					-pyrite band @ 88.7m	88.41	89.74	1.33	N111886	98	9210	70	434	1	
					-mafic phenocrysts	89.74	91.14	1.40	N111887	99	524	30	384	0	
						91.14	92.66	1.52	N111888	99	756	26	258	0	
106.75	109.40	2.65	F	BRBS	epidote rich breccia basalt "aphanitic"										
109.40	115.15	5.75	F	MSBS	massive basalt "aphanitic"										
115.15	121.34	6.19	F	BRBS	breccia basalt "aphanitic"										
					-red earthy hematite in matrix	117.00	118.41	1.41	N111889	100	198	29	210	0	
						118.41	119.89	1.48	N111890	95	194	31	100	0	
						119.89	121.34	1.45	N111891	86	396	34	142	0	

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						121.34	122.83	1.49	N111892	83	0.83 %	205	380	1	25
121.34	128.70	7.36	F	SSSG	sulphide stringers with specular hematite										
					-basalt fragments (10%)	122.83	124.36	1.53	N111893	93	2.46 %	215	1080	4	80
					-hematite-pyrite-quartz matrix	124.36	125.37	1.01	N111894	96	1.33 %	235	300	2	40
					-quartz-pyrite stringers	125.37	126.19	0.82	N111895	96	1.09 %	180	1245	1	50
					-quartz-pyrite-chalcopyrite stringers	126.19	127.71	1.52	N111896	97	1.20 %	185	165	1	50
128.70	133.81	5.11	F	SSSG	sulphide stringers										
					-basalt fragments (40%)	127.71	128.70	0.99	N111897	100	3.00 %	155	1510	4	130
					-quartz-pyrite stringers	128.70	129.67	0.97	N111898	94	0.63 %	180	765	<0.2	30
					-quartz-pyrite-chalcopyrite stringers	129.67	130.75	1.08	N111899	96	0.20 %	140	960	<0.2	40
						130.75	132.28	1.53	N111900	96	0.69 %	200	1325	1	40
						132.28	133.81	1.53	N112601	97	1.86 %	255	365	1	30
133.81	135.33	1.52	F	SSSG	sulphide stringers with specular hematite										
					-basalt fragments (5%)	133.81	135.33	1.52	N112602	98	1.30 %	205	195	<0.2	30
					-quartz-hematite-pyrite matrix										
					-quartz-pyrite-chalcopyrite stringers										
135.33	143.95	8.62	F	PYSG	pyritic sulphide stringers										
					-basalt fragments	135.33	136.86	1.53	N112603	95	0.59 %	390	385	<0.2	35
					-quartz-hematite matrix	136.86	138.38	1.52	N112604	97	0.86 %	450	250	<0.2	45
					-quartz-pyrite stringers	138.38	139.90	1.52	N112605	93	0.66 %	515	740	<0.2	25
					-quartz-pyrite-chalcopyrite stringers	139.90	141.43	1.53	N112606	93	0.64 %	460	120	<0.2	15
						141.43	142.95	1.52	N112607	95	0.44 %	460	235	<0.2	<5
						142.95	143.95	1.00	N112608	77	0.20 %	270	320	<0.2	25
143.95	145.02	1.07	F	SSSG	sulphide stringers with specular hematite										
					-basalt fragments (5%)	143.95	145.02	1.07	N112609	100	0.28 %	190	205	<0.2	<5
					-quartz-hematite-pyrite matrix										
					-quartz-pyrite-chalcopyrite stringers										
145.02	158.52	13.50	F	SSSG	sulphide stringers with native copper										
					-basalt fragments (15%)	145.02	146.00	0.98	N112610	99	1.00 %	400	355	<0.2	30
					-hematite-quartz-pyrite matrix	146.00	147.52	1.52	N112611	91	0.71 %	140	925	<0.2	30
					-pyrite-quartz stringers	147.52	149.05	1.53	N112612	91	0.25 %	150	765	<0.2	25
					-pyrite-chalcopyrite-quartz stringers	149.05	150.57	1.52	N112613	99	1.07 %	95	1390	5	15

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-02 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-native copper along fractures	150.57	152.10	1.53	N112614	93	0.39 %	130	2700	1	40
						152.10	153.62	1.52	N112615	100	0.13 %	90	915	<0.2	<5
						153.62	155.14	1.52	N112616	97	0.30 %	110	1325	<0.2	<5
						155.14	156.51	1.37	N112617	84	0.12 %	85	745	<0.2	<5
						156.51	158.04	1.53	N112618	98	0.09 %	115	3570	<0.2	20
						158.04	158.52	0.48	N112619	100	0.24 %	145	1265	<0.2	10
158.52	185.31	26.79	F	BRBS	breccia basalt "aphanitic										
					-pyrite bands in first 4m	158.52	159.56	1.04	N112620	59	1525	108	1775	<0.2	
					-chlorite-epidote matrix	159.56	160.93	1.37	N112621	74	98	70	200	<0.2	
						160.93	162.46	1.53	N112622	92	1485	95	674	<0.2	
185.31	210.01	24.70	F	MSBS	massive basalt "grainy"										
					-calcite-epidote-chlorite veins										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-03 **Property:** ICE **Section:** 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	S Lesnikoff, B.Gay
376,929.69	6,862,675.85	1,267.10	178.00 m	Drilling Dates:	May 22-25, 1997

Depth	14.94	78.64	114.30	148.74	175.41
Azimuth	313	308	306	304	299
Dip	-70	-70	-70	-70	-70
Method	Tropari	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.35	3.35		CSDH	casing										
3.35	6.32	2.97	T	MSBS	massive basalt "grainy"										
6.32	8.45	2.13	T	MSCH	massive chert										
8.45	16.12	7.67	T	MSBS	massive basalt "grainy"										
					-chlorite-epidote altered										
16.12	17.30	1.18	T	MSCH	massive chert										
					-green-grey										
17.30	40.33	23.03	T	MSBS	massive basalt "grainy"										
					-chlorite-epidote altered										
40.33	41.00	0.67	F	HEMS	hematitic mudstone										
					-siliceous										
41.00	50.60	9.60	F	MSBS	massive basalt "grainy"										
					-broken										
50.60	71.17	20.57	F	MSBS	massive basalt "grainy"										
71.17	77.00	5.83	F	MSBS	massive basalt "grainy"										
					-aphanitic										
77.00	94.06	17.06	F	MSBS	massive basalt "grainy"										
					-lower contact minor fault gouge	89.61	91.14	1.53	N112623	95	90	24	68	<1	
						91.14	92.66	1.52	N112624	89	74	23	60	<1	
						92.66	94.06	1.40	N112625	100	92	28	78	<1	
94.06	97.14	3.08	F	PYMS	massive pyrite with chalcopyrite										
					-chalcopyrite veins	94.06	95.70	1.64	N112626	100	2.84%	495	780	8	350
					-locally calcareous										
					-rare hematitic chert bands	95.70	97.14	1.44	N112627	100	1.68%	920	4650	7	505
97.14	97.49	0.35	F	HECH	hematitic chert										
					-chalcopyrite infilling fractures,	97.14	97.49	0.35	N112628	100	1.31%	138	1700	4	480
					-30% pyrite bands										
97.49	107.29	9.80	F	PHBSm	porphyritic breccia basalt "aphanitic"										
					-basalt fragments with mafic phenocrysts	97.49	98.76	1.27	N112629	99	437	21	258	<1	
					-cross cut by calcite-quartz-epidote veins	98.76	100.28	1.52	N112630	100	336	26	132	<1	
						100.28	101.80	1.52	N112631	100	120	24	66	<1	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-03 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
107.29	113.88	6.59	F	PHBSm	porphyritic massive basalt "aphanitic"										
113.88	117.40	3.52	F	MSBS	massive basalt "aphanitic"										
117.40	120.30	2.90	F	BRBS	breccia basalt "aphanitic"										
					-epidote veined										
120.30	124.35	4.05	F	BRBS	breccia basalt "aphanitic"										
124.35	138.25	13.90	F	BRBS	breccia basalt "aphanitic"										
						135.33	136.86	1.53	N112630	99	336	26	132	<1	
						136.86	138.25	1.39	N112633	98	120	24	66	<1	
138.25	140.03	1.78	F	SGBS	weak stringers in breccia basalt "aphanitic"										
					-quartz-pyrite-chalcopyrite stringers	138.25	139.32	1.07	N112634	100	949	72	300	<1	
					-quartz-pyrite-hematite-chlorite matrix	139.32	140.03	0.71	N112635	100	2180	88	108	1	
140.03	147.9	7.87	F	MSBS	massive basalt "aphanitic"										
					epidote-calcite-quartz veins	140.03	141.43	1.40	N112636	97	69	26	84	<1	
						141.43	142.95	1.52	N112637	92	156	29	68	<1	
147.90	151.32	3.42	F	MSBS	broken massive basalt "aphanitic"										
151.32	178.00	26.68	F	MSBS	massive basalt "aphanitic"										
					-irregular epidote-chlorite veins										
					-cross cutting calcite-quartz±epidote veins										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-04 | Property: ICE | Section: 11,300 N

	Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
	376,809.11	6,862,731.20	1,294.20	98.45	Drilling Dates:	May 26-29, 1997

Depth	0.00	25.60	51.05	
Azimuth	303	301	300	
Dip	-50	-51	-52	
Method	Brunton	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	4.27	1.83	T	RBCH	red, green, and grey ribbon chert										
4.27	14.48	10.21	T	MSBS	broken massive basalt "grainy"										
14.48	28.41	13.93	F	MSBS	massive basalt "grainy"										
28.41	28.85	0.44	F	MSCH	greenish-red massive chert										
28.85	50.80	21.95	F	MSBS	massive basalt "grainy"										
						46.94	48.46	1.52	N112638	97	72	28	82	<1	
						48.46	49.99	1.53	N112639	98	59	26	76	<1	
						49.99	50.80	0.81	N112640	69	74	36	106	<1	
50.80	51.21	0.41	S	MSCH	massive chert with massive basalt									<1	
					-lower part of interval is massive basalt	50.80	51.21	0.41	N112641	68	257	55	762	<1	
51.21	55.71	4.50	T	PYMS	brecciated pyritic massive sulphides										
					-both tectonic and primary breccias	51.21	52.73	1.52	N112642	99	2.37 %	715	330	8.0	445
					-pyrite-chalcopyrite-quartz matrix	52.73	54.25	1.52	N112643	100	3.14 %	700	330	41.0	240
						54.25	55.61	1.36	N112644	97	2.60 %	400	685	18.0	175
55.71	58.85	3.14	T	FBBS	faulted porphyritic basalt "aphanitic"										
						55.71	57.00	1.29	N112645	91	471	34	246	<1	
						57.00	57.90	0.90	N112646	100	1170	54	364	0.8	
						57.90	58.85	0.95	N112647	64	411	29	362	<1	
58.85	68.58	9.73	F	PHBS	epidote veined porphyritic basalt "aphanitic"										
68.58	72.84	4.26	F	PHBS	porphyritic basalt "aphanitic"										
72.84	80.47	7.63	F	BRBS	breccia basalt "aphanitic"										
						74.68	76.18	1.50	N112648	91	499	42	944	0.8	
						76.18	77.42	1.24	N112649	82	289	36	664	0.2	
						77.42	78.94	1.52	N112650	96	1730	53	196	0.6	
						78.94	80.47	1.53	N112651	62	330	44	122	<1	
80.47	82.33	1.86	F	FBBS	faulted basalt "aphanitic"										
						80.47	81.53	1.06	N112652	35	4080	149	400	0.2	
						81.53	82.33	0.80	N112653	64	2390	63	206	0.2	
82.33	86.76	4.43	F	FBPY	fault breccia with pyrite fragments										
					-cemented with calcite vein	82.33	83.51	1.18	N112654	63	812	64	274	0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-04 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						83.51	85.04	1.53	N112655	92	209	90	172	<1	
						85.04	86.76	1.72	N112656	92	526	127	272	<1	
86.76	98.45	11.69	F	FBBS	faulted basalt "aphanitic"/"grainy"										
						86.76	87.63	0.87	N112657	59	1575	65	364	1	
						87.63	89.15	1.52	N112658	30	103	41	214	<1	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-05 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,850.98	6,862,665.71	1,277.94	263.96	Sefika Lesnikoff	May 29-June 5,1997

Depth	0.00	25.91	84.73	155.45	226.16
Azimuth	318	318	317	320	314
Dip	-50	-51	-52	-52	-51
Method	Brunton	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH											
1.22	1.68	0.46		OBDH											
1.68	2.64	0.96	T	MSCH	red massive chert										
2.64	7.08	4.44	T	MSBS	massive basalt "grainy"										
7.08	15.85	8.77	F	MSBS	broken massive basalt "grainy"										
15.85	27.26	11.41	F	MSBS	massive basalt "grainy"										
27.26	28.52	1.26	F	HECH	hematitic chert, weakly bedded										
28.52	34.55	6.03	F	MSBS	massive basalt "grainy"										
34.55	72.26	37.71	F	MSBS	epidote-chlorite altered massive basalt "grainy"										
72.26	73.67	1.41	F	MSBS	fine grained massive basalt "grainy"										
73.67	74.80	1.13	F	MSBS	broken massive basalt "grainy"										
74.80	85.90	11.10	F	MSBS	epidote altered massive basalt "grainy"										
85.90	86.26	0.36	F	HECH	hematitic chert										
86.26	95.40	9.14	F	PHBS	porphyritic breccia basalt "aphanitic"										
					-with porphyritic basalt clasts	91.51	92.89	1.38	N112659	100	163	27	72	<1	
					-chlorite-epidote matrix	92.89	94.18	1.29	N112660	100	169	31	70	<1	
						94.18	95.40	1.22	N112661	100	161	29	96	<1	
95.40	102.07	6.67	F	SSSG	stringer sulphides										
					-basalt fragments	95.40	96.62	1.22	N112662	98	0.58%	201	4240	3.4	113
					-quartz- specular hematite-pyrite matrix	96.62	98.15	1.53	N112663	100	0.73%	174	2960	4.8	135
					-quartz-pyrite stringers	98.15	99.24	1.09	N112664	98	0.38%	120	2500	2.2	80
					-quartz-chalcopyrite stringers	99.24	100.28	1.04	N112665	100	0.58%	149	2610	2.6	70
					-quartz-chlorite-earthy hematite stringers	100.28	101.19	0.91	N112666	100	1.32%	216	1950	3.0	85
						101.19	102.07	0.88	N112667	100	0.23%	160	5060	7.0	215
102.07	104.91	2.84	F	BRBS	breccia basalt "grainy"										
					-with massive sulphide bands	102.07	103.33	1.26	N112668	100	877	37	1020	0.8	
						103.33	104.91	1.58	N112669	100	1020	37	2820	1.0	
104.91	117.60	12.69	F	HESG	hematitic stringers in breccia basalt "grainy"										
					-with 10 % pyrite	104.91	105.77	0.86	N112670	94	334	61	1000	<1	
					-specular hematite-pyrite matrix	105.77	106.98	1.21	N112671	64	213	60	728	0.6	
						106.98	107.90	0.92	N112672	98	73	71	968	<1	

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						107.90	109.42	1.52	N112673	100	341	138	614	0.8	
						109.42	110.95	1.53	N112674	100	19	68	288	<1	
						110.95	112.47	1.52	N112675	100	5	70	272	<1	
						112.47	114.00	1.53	N112676	99	11	84	226	<1	
						114.00	115.52	1.52	N112677	95	62	58	390	0.6	
						115.52	116.43	0.91	N112678	93	24	62	494	0.6	
						116.43	117.60	1.17	N112679	100	36	51	474	<1	
117.60	121.17	3.57	F	HESG	hematitic stringers in breccia basalt with 15-20% pyrite										
					-with 15-20 % pyrite	117.60	118.57	0.97	N112680	100	103	133	184	0.8	
					-specular hematite-quartz-pyrite matrix	118.57	120.09	1.52	N112681	95	96	84	1510	1.2	
						120.09	121.17	1.08	N112682	97	28	86	308	0.6	
121.17	124.00	2.83	F	PYSG	very pyritic stringers										
					-pyrite clasts with minor basalt clasts	121.17	122.53	1.36	N112683	100	168	368	290	<1	
					-pyrite-specular hematite-quartz matrix	122.53	124.00	1.47	N112684	100	113	307	220	<1	
124.00	127.42	3.42	F	SSSG	stringer sulphides										
					-basalt fragments	124.00	125.30	1.30	N112685	100	76	154	1425	1.0	
					-specular hematite-quart-pyrite matrix	125.30	126.19	0.89	N112686	100	204	192	570	1.4	
					-quartz-pyrite stringers	126.19	127.42	1.23	N112687	100	118	204	480	1.4	
127.42	127.97	0.55	F	HECH	hematitic chert										
					-50% broken breccia basalt, 50% hematitic chert	127.42	127.97	0.55	N112688	84	176	59	660	0.6	
127.97	137.60	9.63	F	BRBS	chlorite altered breccia basalt										
						127.97	129.24	1.27	N112689	85	546	56	628	3.2	
						129.24	130.45	1.21	N112690	91	461	33	322	0.6	
137.60	140.38	2.78	F	GGBS	basalt gouge										
140.38	145.59	5.21	F	BRBS	breccia basalt "aphanitic"										
145.59	149.20	3.61	F	MSBS	massive basalt "grainy"										
149.20	156.97	7.77	F	FBBS	faulted basalt "grainy"										
156.97	166.70	9.73	F	MSBS	massive basalt "grainy"										
166.70	170.38	3.68	F	FBBS	faulted basalt "grainy"										
170.38	182.73	12.35	F	MSBS	massive basalt "grainy"										
182.73	189.80	7.07	F	MSBS	broken massive basalt "grainy"										
189.80	192.94	3.14	F	BRBS	altered breccia basalt										

*S-strong weathering, T-transitional weathering, F-fresh

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-muscovite (?) in the matrix	189.80	191.41	1.61	N112692	100	248	34	264	<1	
						191.41	192.94	1.53	N112693	100	515	45	192	<1	
192.94	198.73	5.79	F	CBMS	carbonaceous mudstone										
					-foliated mudstone	192.94	194.46	1.52	N112694	100	84	15	170	<1	
					-interbeds of calcareous siltstone	194.46	195.99	1.53	N112695	100	63	11	124	<1	
						195.99	197.51	1.52	N112696	99	65	14	122	<1	
						197.51	198.73	1.22	N112697	72	66	8	106	<1	
198.73	213.06	14.33	F	RBCH	ribbon chert										
					-chert interbeds	198.73	199.95	1.22	N112698	100	50	6	90	<1	
					-minor mudstone interbeds	199.95	200.86	0.91	N112699	36	50	4	80	0.2	
						200.86	202.08	1.22	N112700	51	54	5	64	<1	
						202.08	203.30	1.22	N112751	52	73	5	52	0.2	
						203.30	204.98	1.68	N112752	54	55	5	86	<1	
						204.98	205.74	0.76	N112753	97	44	15	104	<1	
						205.74	207.11	1.37	N112754	66	53	3	70	<1	
						207.11	208.03	0.92	N112755	30	63	4	38	<1	
						208.03	209.25	1.22	N112756	100	65	5	46	<1	
						209.25	210.31	1.06	N112757	100	55	4	34	<1	
						210.31	211.53	1.22	N112758	87	73	7	58	<1	
						211.53	213.06	1.53	N112759	100	66	7	64	<1	
213.06	226.31	13.25	F	RBCH	ribbon chert										
					-green chert (50-60 %)	213.06	214.58	1.52	N112760	100	137	7	42	<1	
					-chlorite-muscovite(?) phyllite interbeds	214.58	216.10	1.52	N112761	100	79	11	62	<1	
					-bedding 30-58°	216.10	216.87	0.77	N112762	100	41	12	68	<1	
						216.87	218.39	1.52	N112763	100	50	13	74	<1	
						218.39	219.76	1.37	N112764	100	40	15	82	<1	
						219.76	220.68	0.92	N112765	100	58	12	68	<1	
						220.68	221.59	0.91	N112766	100	45	12	58	<1	
						221.59	222.96	1.37	N112767	79	56	12	72	<1	
						222.96	223.72	0.76	N112768	25	70	8	50	<1	
						223.72	224.94	1.22	N112769	16	38	7	38	<1	
						224.94	226.31	1.37	N112770	28	53	7	36	<1	
226.31	233.78	7.47	F	RBCH	ribbon chert										

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-chert interbeds (65-70 %)	226.31	227.38	1.07	N112771	86	75	7	72	<1	
					-black carbonaceous mudstone	227.38	228.30	0.92	N112772	55	73	8	96	0.4	
					-bedding from 32-50°	228.30	229.21	0.91	N112773	100	69	7	78	0.2	
						229.21	230.73	1.52	N112774	89	63	8	88	0.2	
						230.73	232.26	1.53	N112775	63	65	3	50	0.4	
						232.26	233.78	1.52	N112776	99	50	7	94	0.2	
233.78	245.97	12.19	F	FLMS	faulted mudstone										
					-with 30-40% chert interbeds	233.78	235.31	1.53	N112777	91	57	7	96	0.2	
					-chlorite-muscovite phyllite, 15%	235.31	236.52	1.21	N112778	100	61	8	88	<1	
						236.52	237.74	1.22	N112779	87	52	6	62	<1	
						237.74	238.68	0.94	N112780	51	36	6	66	<1	
						238.68	239.88	1.20	N112781	95	50	7	92	<1	
						239.88	241.25	1.37	N112782	100	51	6	72	<1	
						241.25	242.77	1.52	N112783	100	57	7	74	<1	
						242.77	243.84	1.07	N112784	100	51	6	106	0.2	
						243.84	245.06	1.22	N112785	100	48	6	74	0.2	
						245.06	245.97	0.91	N112786	100	52	6	82	0.2	
245.97	250.70	4.73	F	RBCH	ribbon chert										
					-grey chert	245.97	247.50	1.53	N112787	89	57	5	74	<1	
					-carbonaceous mudstone interbeds	247.50	248.72	1.22	N112788	55	61	7	78	<1	
					-consistent bedding	248.72	249.63	0.91	N112789	76	62	4	64	0.2	
						249.63	250.70	1.07	N112790	63	72	5	40	<1	
250.70	254.81	4.11	F	FLMS	faulted mudstone										
					-chlorite-muscovite(?) phyllite	250.70	252.22	1.52	N112791	98	71	12	74	<1	
					-grey chert interbeds	252.22	253.90	1.68	N112792	21	56	7	100	0.2	
					-carbonaceous mudstone	253.90	254.81	0.91	N112793	65	60	7	78	0.2	
254.81	263.96	9.15	F	RBCH	ribbon chert										
					-grey and black chert interbeds	254.81	256.03	1.22	N112794	100	64	8	82	<1	
					-black carbonaceous mudstone bands	256.03	256.95	0.92	N112795	98	50	8	136	<1	
						256.95	258.17	1.22	N112796	89	47	8	62	<1	
						258.17	259.23	1.06	N112797	90	59	6	64	<1	
						259.23	260.30	1.07	N112798	63	73	8	86	<1	
						260.30	261.82	1.52	N112799	82	73	8	84	<1	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-05 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						261.82	263.04	1.24	N112800	94	61	5	64	<1	
						263.04	263.96	0.92	N112801	98	65	4	44	<1	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-06 | **Property:** ICE | **Section:** 11,250 N

Easting: 377,007.78 | Northing: 6,862,621.40 | Elevation: 1,255.02 | Depth: 188.67 | Logger: Tanja Reszat | Drilling Dates: June 4-10 1997

Depth	0.00	67.97	88.09	114.30	167.33
Azimuth	307	304	307	307	304
Dip	-50	-52	-52	-52	-52
Method	Tropari	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	6.10	6.10		CSDH	casing										
6.10	13.32	7.22	F	OBDH	overburden										
13.32	13.72	0.40	F	RBCH	grey chert										
13.72	20.48	6.72	F	SDST	dark grey sandstone										
20.48	23.29	2.81	F	RBCH	grey chert										
23.29	27.40	4.11	F	FBCH	faulted and brecciated sandstone										
27.40	29.48	2.08	F	RBCH	grey chert										
29.48	30.58	1.10	F	RBCH	grey chert with sandstone										
30.58	32.00	1.42	F	RBCH	grey chert with mudstone										
32.00	32.60	0.60	F	RBCH	grey chert with sandstone										
32.60	33.52	0.92	F	RBCH	grey chert with gouge										
33.52	35.05	1.53	F	SDST	medium grey sandstone with chert										
35.05	37.36	2.31	F	RBCH	light grey ribbon chert										
37.36	43.36	6.00	F	RBCH	light grey ribbon chert										
					-very broken rock										
43.36	44.88	1.52	F	MSBS	massive basalt										
44.88	62.45	17.59	F	RBCH	black ribbon chert										
62.45	69.27	6.82	F	FLCH	faulted chert with basalt										
69.27	70.69	1.42	F	PHBS	porphyritic massive basalt										
70.69	78.64	7.95	F	MSBS	massive basalt "grainy"										
					-medium-grained										
78.64	88.14	9.50	F	MSBS	massive basalt "grainy"										
					-fine-grained										
88.14	88.33	0.19	F	HECH	hematitic chert										
					-contains 20% pyrite bands	88.14	88.33	0.19	N112802	100	1.07%	110	104	1.8	145
88.33	109.85	21.52	F	MSBS	massive basalt "grainy"										
					-medium grained										
109.85	113.91	4.06	F	MSBS	massive basalt "grainy"										
					-slightly coarser than 88.33 to 109.85										
113.91	120.60	6.99	F	MSBS	massive basalt "grainy"										
					-medium grained										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-06 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
120.60	120.90	0.30	F	MSCH	pinkish green massive chert										
120.90	125.59	4.69	F	MSBS	massive basalt "grainy"										
					-fine grained										
125.59	138.62	13.03	F	MSBS	massive basalt "grainy"										
138.62	142.97	4.32	F	BRBS	breccia basalt "grainy"										
142.97	143.58	0.61	F	HECH	hematitic chert										
					-contains pyrite stringers	142.97	143.58	0.61	N112803	84	0.47%	36	84	0.6	135
143.58	151.69	8.11	F	MSBS	massive basalt "grainy"										
						148.69	150.19	1.50	N112804	89	118	30	102	<0.2	
						150.19	151.69	1.50	N112805	81	72	29	96	<0.2	
151.69	153.70	2.01	F	HECH	hematitic chert										
					-30-40% massive pyrite layers	151.69	152.75	1.06	N112806	49	1.00%	315	386	5.0	190
					-pyrite/chert contact is 60° from core axis	152.75	153.70	0.95	N112807	59	1.49%	374	2570	7.0	350
153.70	154.53	0.83	F	BRBS	breccia basalt "aphanitic"										
					-abundant epidote in matrix and veins	153.70	154.53	0.83	N112808	78	1730	48	308	0.4	
154.53	171.34	16.81	F	BRBS	breccia basalt "aphanitic										
					-very broken	154.53	156.03	1.50	N112809	94	194	37	90	<0.2	
						156.03	157.53	1.50	N112810	46	106	29	60	<0.2	
171.34	178.00	6.66	F	BRBS	breccia basalt "aphanitic"										
178.00	188.67	10.67	F	BRBS	breccia basalt "aphanitic"										
					-very broken										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-07 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,850.22	6,862,665.75	1,277.82	174.96	Sefika Lesnikoff	June 6-9, 1997

Depth	0.00	21.03	71.17	117.04	174.95
Azimuth	318	328	326	314	317
Dip	-80	-80	-81	-81	-81
Method	Brunton	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.13	0.91	T	MSCH	greenish grey massive chert										
2.13	3.60	1.47	T	MSCH	red massive chert										
3.60	11.28	7.68	T	MSBS	broken massive basalt "grainy"										
11.28	20.88	9.60	F	MSBS	massive basalt "grainy"										
20.88	22.15	1.27	T	MSCH	broken red and green massive chert										
22.15	25.17	3.02	T	MSBS	massive basalt "grainy"										
25.17	26.00	0.83	T	MSCH	red massive chert										
26.00	27.89	1.89	S	FLBS	faulted basalt "grainy"										
						26.00	26.97	0.97	N112811	80	70	32	82	0.4	
						26.97	27.89	0.92	N112812	61	77	35	88	<0.2	
27.89	28.80	0.91	T	MSBS	massive basalt "grainy"										
						27.89	28.80	0.91	N112813	84	69	42	118	0.2	
28.80	29.80	1.00	F	CAVN	calcite veined basalt										
					-minor pyrite	28.80	29.80	1.00	N112814	100	25	25	88	<0.2	
29.80	31.55	1.75	S	FLBS	faulted basalt "grainy"										
					-minor pyrite	29.80	31.55	1.75	N112815	78	54	44	110	<0.2	
31.55	38.71	7.16	S	MSBS	broken massive basalt "grainy"										
						31.55	32.16	0.61	N112816	99	69	51	134	0.2	
38.71	41.84	3.13	T	MSBS	massive basalt "grainy"										
41.84	42.98	1.14	T	MSBS	broken massive basalt "grainy"										
42.98	47.20	4.22	F	MSBS	massive basalt "grainy"										
47.20	48.90	1.70	F	MSCH	pinkish to dark green massive chert										
48.90	58.20	9.30	F	MSBS	massive basalt "grainy"										
58.20	59.00	0.80	F	MSBS	massive basalt "grainy"										
					-contains sporadic patches of pyrite										
59.00	69.30	10.30	F	MSBS	massive basalt "grainy"										
69.30	70.25	0.95	F	MSBS	epidote altered and veined basalt "grainy"										
70.25	73.67	3.42	F	MSBS	massive basalt "grainy"										
73.67	74.26	0.59	F	HECH	red hematitic chert										
						73.67	74.26	0.59	N112817	100	58	13	50	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
74.26	77.20	2.94	F	MSBS	massive basalt "grainy"										
						74.26	75.59	1.33	N112818	98	119	32	138	0.2	
						75.59	77.20	1.61	N112847	86	242	46	288	0.2	
77.20	78.18	0.98	F	PYMS	massive pyrite										
					-fine grained pyrite and chalcopyrite	77.20	78.18	0.98	N112819	100	7.42%	508	2200	15.8	620
					-interstitial bornite										
78.18	83.20	5.02	F	PHBS	porphyritic breccia basalt "aphanitic"										
						78.18	79.55	1.37	N112820	98	296	33	140	0.8	
						79.55	81.08	1.53	N112821	100	612	28	70	<0.2	
						81.08	82.45	1.37	N112822	85	68	20	46	0.4	
83.20	84.80	1.60	F	PHBS	porphyritic breccia basalt "aphanitic"										
84.80	95.20	10.40	F	BRBS	breccia basalt "aphanitic"										
95.20	100.30	5.10	F	BRBS	hematitic breccia basalt "aphanitic"										
100.30	101.80	1.50	F	BRBS	broken breccia basalt "aphanitic"										
101.80	108.51	6.71	F	BRBS	breccia basalt "aphanitic"										
						104.59	105.46	0.87	N112823	94	1105	33	676	0.6	
						105.46	106.98	1.52	N112824	86	145	31	268	0.2	
						106.98	108.51	1.53	N112825	98	367	37	188	<0.2	
108.51	120.09	11.58	F	SSSG	stringer sulphides										
					-basalt fragments	108.51	109.88	1.37	N112826	50	888	66	378	0.2	
					-quartz-pyrite-specular hematite matrix	109.88	110.95	1.07	N112827	84	634	86	166	0.4	
					-quartz-pyrite stringers	110.95	112.47	1.52	N112828	98	0.91%	106	954	1.6	40
					-quartz-pyrite-chalcopyrite	112.47	114.00	1.53	N112829	100	0.31%	110	132	1.0	25
					-quartz-chlorite-red hematite stringers	114.00	115.52	1.52	N112830	100	1.64%	104	196	3.2	160
						115.52	117.04	1.52	N112831	97	0.09%	86	336	1.0	25
						117.04	118.57	1.53	N112832	97	0.16%	92	100	0.8	20
						118.57	120.09	1.52	N112833	93	0.91%	102	656	3.8	70
120.09	138.75	18.66	F	SSSG	stringer sulphides with specular hematite										
					-basalt fragments	120.09	121.62	1.53	N112834	95	0.19%	86	398	0.6	70
					-quartz-specular hematite matrix	121.62	123.14	1.52	N112835	95	0.11%	89	152	0.4	15
					-quartz-pyrite stringers	123.14	124.66	1.52	N112836	100	0.29%	79	370	0.8	35
					-quartz-pyrite-shalcopyrite stringers	124.66	126.03	1.37	N112837	94	0.98%	98	754	1.8	60
					-quartz-chlorite-red hematite stringers	126.03	127.56	1.53	N112838	100	0.37%	77	1010	0.6	60

*S-strong weathering, T-transitional weathering, F-fresh

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						127.56	129.08	1.52	N112839	95	0.66%	128	608	1.6	40
						129.08	130.61	1.53	N112840	93	0.29%	108	3400	1.0	130
						130.61	132.21	1.60	N112841	95	0.15%	97	576	0.6	65
						132.21	133.73	1.52	N112842	98	0.24%	117	492	0.6	40
						133.73	135.26	1.53	N112843	100	0.89%	83	230	1.2	20
						135.26	136.78	1.52	N112844	100	537	89	162	0.6	
						136.78	137.83	1.05	N112845	85	947	109	484	0.4	
						137.83	138.75	0.92	N112846	96	3540	119	420	0.8	
138.75	146.00	7.25	F	BRBS	breccia basalt "grainy/aphanitic"										
						138.75	139.90	1.15	N112848	83	232	37	236	0.2	
						139.90	141.43	1.53	N112849	95	93	33	90	<0.2	
						141.43	142.95	1.52	N112850	100	97	31	84	<0.2	
146.00	156.97	10.97	F	MSBS	broken massive basalt "grainy"										
156.97	174.96	17.99	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-08 | Property: ICE | Section: 11,250 N

	Easting:	Northing:	Elevation:	Depth:	Logger:	
	376,911.63	6,862,615.18	1,257.48	132.28	Drilling Dates:	June 10-14, 1997

Depth	0.00	11.89	27.74	47.85	109.42
Azimuth	307	308	311	305	309
Dip	-50	-50	-50	-51	-51
Method	Survey	Tropari	Tropari	Tropari	Tropari

Sefika Lesnikoff

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	2.50	0.67		OBDH	overburden										
2.50	6.40	3.90	S	MSBS	broken massive basalt "grainy"										
6.40	9.85	3.45	T	MSBS	massive basalt "grainy"										
9.85	11.94	2.09	T	MSBS	broken massive basalt "grainy"										
11.94	14.60	2.66	T	MSBS	massive basalt "grainy"										
14.60	16.00	1.40	S	MSBS	broken massive basalt "grainy"										
16.00	17.53	1.53	T	MSBS	calcite veined massive basalt "grainy"										
17.53	19.15	1.62	S	MSBS	broken massive basalt "grainy"										
19.15	20.12	0.97	T	MSCH	red massive chert										
20.12	21.44	1.32	T	MSBS	broken massive basalt "grainy"										
21.44	23.10	1.66	F	MSCH	dark red with minor green-grey massive chert										
23.10	25.00	1.90	T	MSBS	broken massive basalt "grainy"										
25.00	27.23	2.23	T	MSCH	red and green massive chert										
					-interbedded with grey chert										
27.23	30.74	3.51	T	MSBS	massive basalt "grainy"										
30.74	34.15	3.41	T	FLBS	faulted basalt "grainy"										
34.15	36.27	2.12	F	MSBS	veined massive basalt "grainy"										
36.27	54.60	18.33	F	MSBS	massive basalt "grainy"										
54.60	62.80	8.20	F	MSBS	*fine grained massive basalt* "grainy"										
62.80	65.00	2.20	F	MSBS	broken massive basalt "grainy"										
65.00	73.95	8.95	F	MSBS	massive basalt "grainy"										
						70.06	71.32	1.26	N112885	99	62	25	92	0.2	
						71.32	72.85	1.53	N112886	103	74	27	102	<0.2	
						72.85	73.95	1.10	N112887	81	64	28	106	<0.2	
73.95	75.12	1.17	F	PYMS	massive sulphide										
					-brecciated pyrite, pyrite matrix										
					-chalcopyrite and quartz along fractures	73.95	75.12	1.17	N112888	100	2.88%	710	3410	14	510
75.12	82.80	7.68	F	PHBS	porphyritic breccia basalt "aphanitic"										
					-phenocrysts	75.12	76.40	1.28	N112889	86	1235	26	202	<0.2	
					-chlorite and epidote matrix	76.40	77.42	1.02	N112890	105	100	26	62	<0.2	
						77.42	78.94	1.52	N112891	100	84	22	52	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-08 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
82.80	94.78	11.98	F	MSBS	massive basalt "grainy"										
94.78	99.23	4.45	F	MSBS	fine grained massive basalt "grainy"										
99.23	99.43	0.20	F	PYMS	broken massive sulphide										
					-brecciated pyrite, pyrite matrix	99.23	99.43	0.20	N112892	60	0.47	118	378	1.6	115
					-chalcopyrite and quartz along fractures										
99.43	101.00	1.57	F	PHBS	porphyritic breccia basalt "aphanitic"										
101.00	113.35	12.35	F	BRBS	aphanitic breccia basalt "aphanitic"										
113.35	119.00	5.65	F	BRBS	hematititc breccia basalt "aphanitic"										
119.00	131.20	12.20	F	BRBS	breccia basalt "aphanitic"										
131.20	132.28	1.08	F	BRBS	red hematitic breccia basalt "aphanitic"										
					-hematitic zoning in basalt clasts										
					-weakly foliated matrix										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-09 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,007.79	6,862,621.40	1,255.02	186.54	Tanja Reszat	June 10-15, 1997

Depth	0.00	32.00	102.41	148.13	184.71
Azimuth	305	303	301	299	299
Dip	-72	-71	-70	-70	-71
Method	Survey	Tropari	Tropari	Tropri	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	6.71	4.27	F	OBDH	overburden										
6.71	9.45	2.74	F	SDST	sandstone										
9.45	11.94	2.49	F	FLCH	faulted black and grey ribbon chert										
						9.45	11.94	2.49	N112851	59	62	5	58	<0.2	
11.94	30.08	15.65	F	FLSD	faulted and gouged sandstone										
						11.94	14.43	2.49	N112852	72	68	7	76	<0.2	
						14.43	17.07	2.64	N112853	60	38	11	110	<0.2	
						17.07	19.51	2.44	N112854	22	42	17	140	0.2	
						19.51	22.86	3.35	N112855	15	51	8	78	<0.2	
						22.86	25.91	3.05	N112856	17	47	10	102	<0.2	
						25.91	27.74	1.83	N112857	26	41	11	106	<0.2	
						27.74	30.08	2.43	N112858	19	44	9	84	<0.2	
30.08	30.48	0.4	F	MSBS	massive basalt "grainy"										
						30.08	30.48	0.40	N112859	60	84	24	84	<0.2	
30.48	35.06	4.58	F	GGCH	faulted and gouged chert										
					-black and grey	30.48	32.46	1.98	N112860	31	47	9	98	<0.2	
						32.46	35.06	2.60	N112861	26	75	7	60	<0.2	
35.06	46.54	11.48	F	RBCH	light greenish grey ribbon chert										
						35.06	38.10	3.04	N112862	42	84	7	60	<0.2	
						38.10	41.15	3.05	N112863	61	108	8	52	<0.2	
						41.15	43.58	2.53	N112864	80	74	10	52	<0.2	
						43.58	46.54	2.96	N112865	84	41	9	50	<0.2	
46.54	47.91	1.37	F	MSBS	massive basalt "grainy"										
						46.54	47.91	1.37	N112866	99	80	28	64	<0.2	
47.91	51.67	3.76	F	RBCH	dark grey to black ribbon chert										
					-last 0.40 is fault gouge	47.91	51.67	3.76	N112867	71	61	8	62	<0.2	
51.67	54.52	2.85	F	RBCH	light greenish grey ribbon chert										
						51.67	54.52	2.85	N112868	99	82	8	58	<0.2	
54.52	57.00	2.48	F	RBCH	black ribbon chert										
						54.52	57.00	2.48	N112869	89	66	6	106	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
57.00	58.22	1.22	F	LCDH	no core										
					-mud (possible fault)										
58.22	63.71	2.74	F	RBCH	grey and black ribbon chert										
						58.22	60.96	2.74	N112870	100	98	6	66	0.2	
						60.96	63.71	2.75	N112871	71	104	10	68	<0.2	
63.71	65.58	1.87	F	MSBS	massive altered basalt "grainy"										
65.58	71.76	6.18	F	MSBS	massive basalt "grainy"										
					-contains epidote altered plagioclase										
71.76	75.76	4.00	F	MSBS	massive basalt "grainy"										
					-epidote altered										
75.76	76.55	0.79	F	MSCH	red and light greenish grey massive chert										
76.55	79.06	2.51	F	MSBS	veined massive basalt "grainy"										
79.06	85.65	6.59	F	MSCH	pinkish green massive chert										
85.65	100.47	14.82	F	MSBS	massive basalt "grainy"										
100.47	101.40	0.93	F	MSCH	pinkish green massive chert										
101.40	110.64	9.24	F	FBBS	tectonic breccia basalt "grainy"										
110.64	137.66	27.02	F	MSBS	massive basalt "grainy"										
					-epidote altered crystals are abundant										
137.66	141.97	4.31	F	MSBS	massive basalt "grainy"										
						137.66	139.08	1.42	N112872	99	80	25	82	<0.2	
						139.08	140.51	1.43	N112873	94	81	22	68	<0.2	
						140.51	141.97	1.46	N112874	96	91	23	84	<0.2	
141.97	142.89	0.92	F	HECH	hematitic chert with pyrite layers										
					-contains trace amounts of chalcopyrite	141.97	142.89	0.92	N112875	100	6970	93	8190	2.2	350
142.89	150.77	1.47	F	MSBS	massive basalt "grainy"										
						142.89	144.36	1.47	N112876	99	78	31	142	<0.2	
						144.36	145.81	1.45	N112877	94	79	30	112	0.2	
						145.81	147.21	1.40	N112878	100	83	26	102	0.2	
						147.21	148.99	1.78	N112879	82	66	29	100	<0.2	
						148.99	150.77	1.78	N112880	101	73	31	124	<0.2	
150.77	151.25	0.48	F	HECH	hematitic chert with pyrite bands										
					-contains trace amounts of chalcopyrite	150.77	151.25	0.48	N112881	88	2.04%	371	4140	10.4	665
151.25	156.07	4.82	F	MSBS	massive basalt "grainy"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-09 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						151.25	152.83	1.58	N112882	100	206	30	112	<0.2	
						152.83	154.33	1.50	N112883	98	108	28	114	<0.2	
						154.33	155.76	1.43	N112884	100	63	29	110	<0.2	
156.07	171.14	15.07	F	BRBS	breccia basalt "aphanitic"										
					-very broken										
171.14	186.54	15.40	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: ID97-10 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,912.09	6,862,614.79	1,257.66	149.96	Sefika Lesnikoff	June 14-16,1997

Depth	0.00	36.27	109.42	
Azimuth	300	304	290	
Dip	-80	-82	-82	
Method	Survey	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	1.60	0.38		OBDH	overburden										
1.60	7.00	5.40	S	MSBS	broken massive basalt "grainy"										
7.00	21.30	14.30	T	MSBS	broken masssive basalt "grainy"										
21.30	32.00	10.70	F	MSBS	massive basalt "grainy"										
32.00	33.90	1.90	F	MSBS	fine grained massive basalt "grainy"										
33.90	50.60	16.70	F	MSBS	epidote altered massive basalt "grainy"										
50.60	101.15	50.55	F	MSBS	massive basalt "grainy"										
						97.23	98.42	1.19	N112893	94	66	27	88	<0.2	
						98.42	99.83	1.41	N112894	91	242	29	90	<0.2	
						99.83	101.15	1.32	N112895	89	84	26	82	<0.2	
101.15	102.10	0.95	F	HECH	hematitic chert										
					-contains 15% pyrite bands with minor chalcopyrite	101.15	102.10	0.95	N112896	103	0.72%	75	690	2.8	
102.10	111.35	9.25	F	MSBS	massive basalt "grainy"										
					-fine grained	102.10	103.33	1.23	N112897	100	323	31	126	<0.2	
						103.33	104.85	1.52	N112898	99	61	24	108	<0.2	
						104.85	106.38	1.53	N112899	100	80	24	98	<0.2	
						108.33	109.83	1.50	N112900	97	45	27	110	<0.2	
						109.83	111.35	1.52	N112901	89	98	27	156	<0.2	
111.35	111.55	0.20	F	HEMS	broken hematitic mudstone										
					-contains 10% sulphides with trace chalcopyrite	111.35	111.55	0.20	N112902	100	0.31%	54	294	0.8	
111.55	115.27	3.72	F	PHBS	porphyritic basalt "aphanitic"										
						111.55	113.06	1.51	N112903	99	210	24	56	<0.2	
						113.06	114.40	1.34	N112904	100	337	30	62	<0.2	
115.27	123.20	6.66	F	BRBS	breccia basalt "aphanitic"										
123.20	125.75	2.55	F	BRBS	altered breccia basalt "aphanitic"										
125.75	133.00	7.25	F	BRBS	breccia basalt "aphanitic"										
133.00	138.80	5.80	F	BRBS	calcite veined hematitic breccia basalt "aphanitic"										
138.80	149.96	11.16	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-11 | **Property:** ICE | **Section:** 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,944.15	6,862,723.54	1,273.16	190.20	Bryan Gay	June 16-21, 1997

Depth	0.00	38.10	74.68	
Azimuth	310	303	307	
Dip	-51	-51	-52	
Method	Survey	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.52	1.52		CSDH	casing										
1.52	2.09	0.57	S	OBDH	overburden										
2.09	4.88	2.79	S	RBCH	dark grey ribbon chert										
4.88	5.50	0.62	S	MSBS	massive basalt "grainy"										
5.50	6.10	0.60	S	MSCH	green massive chert										
6.10	7.10	1.00	S	MSBS	weathered massive basalt and chert "grainy"										
7.10	8.53	1.43	S	MSBS	limonitic massive basalt "grainy"										
8.53	9.14	0.61	T	MSCH	hematitic chert										
9.14	10.15	1.01	T	MSBS	massive basalt "grainy"										
10.15	10.85	0.70	T	MSCH	green massive chert										
10.85	12.63	1.78	T	MSBS	amygdaloidal massive basalt "grainy"										
12.63	13.63	1.00	T	MSCH	red and grey massive chert										
13.63	26.13	12.50	F	MSBS	massive basalt "grainy"										
26.13	27.58	1.45	F	MSCH	fractured red and grey chert										
					-trace pyrite and chalcopyrite										
27.58	55.41	27.83	F	MSBS	massive basalt "grainy"										
					-basalt contains trace chalcopyrite and minor pyrite	51.70	53.02	1.32	N112956	98	93	23	84	<0.2	
						53.02	54.10	1.08	N112957	100	91	27	94	<0.2	
						54.10	55.41	1.31	N112958	100	79	27	122	<0.2	
55.41	56.14	0.73	F	MSCH	red massive chert										
					-trace pyrite and chalcopyrite in calcite veins and fracture	55.41	56.14	0.73	N112959	81	1180	14	84	0.8	
56.14	88.57	32.43	F	MSBS	fractured chloritic massive basalt "grainy"										
					-minor pyrite and chalcopyrite	56.14	57.15	1.01	N112960	100	70	26	98	<0.2	
					associated with calcite-chlorite veinlet	57.15	58.37	1.22	N112961	100	89	26	96	<0.2	
						58.37	59.48	1.11	N112962	100	69	24	90	<0.2	
						84.70	85.85	1.15	N112905	97	64	23	82	<0.2	
						85.85	87.07	1.22	N112906	88	53	24	70	<0.2	
						87.07	88.57	1.50	N112907	82	91	30	96	<0.2	
88.57	93.88	5.31	F	PYMS	pyrite and chalcopyrite rich massive sulphides										
					-massive pyrite, strong chalcopyrite and minor bornite	88.57	89.92	1.35	N112908	70	5.20%	1510	86	8.2	320
					-common interstitial quartz	89.92	91.44	1.52	N112909	91	9.09%	1315	390	24.6	485

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						91.44	92.81	1.37	N112910	90	10.80%	778	348	16.2	340
						92.81	93.88	1.07	N112911	85	12.50%	1820	510	3.6	350
93.88	98.49	4.61	F	PHBS	faulted porphyritic breccia basalt "aphanitic"										
					-disseminated pyrite grains and rare pyrite veinlets	93.88	94.49	0.61	N112912	100	2.77%	412	142	1.0	50
						94.49	95.25	0.76	N112913	100	851	35	108	<0.2	
						95.25	96.01	0.76	N112914	100	810	36	148	<0.2	
98.49	113.39	14.90	F	BRBS	breccia basalt "aphanitic"										
					-minor pyrite associated with late calcite veins	109.20	110.53	1.33	N112915	73	173	24	194	<0.2	
						110.53	111.86	1.33	N112916	100	183	31	680	<0.2	
						111.86	113.39	1.53	N112917	69	273	34	1000	0.2	
113.39	114.02	0.63	F	CPSG	chalcopyrite stringer sulphides										
					-clasts supported by quartz-pyrite-hematite-chalcopyrite	113.39	114.02	0.63	N112918	94	2.93%	182	1075	8.8	
					matrix										
114.02	127.63	13.61	F	BRBS	chloritic breccia basalt "aphanitic"										
						114.02	115.62	1.60	N112919	86	100	29	156	<0.2	
						115.62	117.13	1.51	N112920	79	1510	35	136	0.4	
						117.13	118.85	1.72	N112921	63	73	26	80	<0.2	
						125.91	127.63	1.72	N112922	53	408	50	280	<0.2	
127.63	130.45	2.82	F	MSBS	massive basalt "grainy"										
						127.63	128.96	1.33	N112923	77	83	27	88	<0.2	
						128.96	130.45	1.49	N112924	99	112	27	118	<0.2	
130.45	144.26	13.81	F	SSSG	stringer sulphides										
					-contains disseminated pyrite and chalcopyrite	130.45	132.08	1.63	N112925	71	2880	201	1835	3.6	
					and minor hematite	132.08	133.41	1.33	N112926	90	0.37%	204	3680	3.4	145
						133.41	134.90	1.49	N112927	89	0.86%	194	5030	4.0	95
						134.90	136.50	1.60	N112928	93	0.65%	200	4520	2.8	115
						136.50	137.90	1.40	N112929	80	0.80%	395	1.29%	4.4	140
						137.90	139.26	1.36	N112930	98	0.51%	223	5440	4.0	135
						139.26	140.70	1.44	N112931	94	0.41%	160	4230	3.8	65
						140.70	142.07	1.37	N112932	93	0.24%	181	4400	4.0	110
						142.07	143.20	1.13	N112933	98	254	166	1010	0.8	
						143.20	144.26	1.06	N112934	83	2190	124	912	2.2	
144.26	163.07	18.81	F	SSSG	barren stringer sulphides										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-11 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-15% of matrix is quartz-pyrite-chlorite and	144.26	145.69	1.43	N112935	84	1900	313	640	1.6	
					trace chalcopyrite and weak hematite	145.69	147.07	1.38	N112936	92	597	287	1795	0.6	
						147.07	148.29	1.22	N112937	100	223	322	8700	1.0	
						148.29	149.55	1.26	N112938	100	335	152	578	0.4	
						149.55	150.88	1.33	N112939	96	720	155	1040	0.4	
						150.88	152.40	1.52	N112940	81	456	191	6236	1.0	
						152.40	153.92	1.52	N112941	100	470	176	294	0.2	
						153.92	155.45	1.53	N112942	96	848	178	3172	2.2	
						155.45	156.97	1.52	N112943	97	47	378	228	0.2	
						156.97	158.31	1.34	N112944	94	66	508	770	0.6	
						158.31	159.68	1.37	N112945	99	57	388	322	0.2	
						159.68	161.21	1.53	N112946	86	52	270	240	<0.2	
						161.21	162.20	0.99	N112947	95	209	298	608	<0.2	
						162.20	163.07	0.87	N112948	99	0.18%	171	564	0.4	10
163.07	168.24	5.17	F	SGBS	weak stringers in breccia basalt "aphanitic"										
					-matrix consists of quartz-pyrite-chalcopyrite-chlorite	163.07	164.59	1.52	N112949	95	0.83%	126	460	1.2	10
					-weak stringer zone	164.59	166.12	1.53	N112950	98	0.58%	99	1230	1.0	10
						166.12	167.18	1.06	N112951	88	0.25%	58	266	0.6	10
						167.18	168.24	1.06	N112952	98	0.55%	94	286	1.0	20
168.24	177.28	9.04	F	BRBS	*chloritic breccia basalt* "aphanitic"										
						168.24	169.62	1.38	N112953	91	789	37	698	0.2	
						169.62	171.24	1.62	N112954	96	187	36	188	0.2	
						171.24	172.60	1.36	N112955	100	139	26	86	<0.2	
177.28	185.00	7.72	F	MSBS	massive basalt "grainy"										
185.00	186.50	1.50	F	MSCH	red and grey massive chert										
186.50	190.20	3.70	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-12 | **Property:** ICE | **Section:** 11, 350N

Easting:	Northing:	Elevation:	Depth:
376,907.06	6,862,751.72	1,285.67	167.94

Logger: Sefika Lesnikoff
Drilling Dates: June 17-21, 1997

Depth	0.00	43.89	109.42	164.29
Azimuth	295	296	301	302
Dip	-50	-50	-51	-57
Method	Survey	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.10	0.88	S	RBCH	dark grey ribbon chert										
2.10	6.20	4.10	S	MSBS	massive basalt "grainy"										
6.20	10.60	4.40	T	MSBS	massive basalt "grainy"										
10.60	11.10	0.50	T	MSCH	dark grey and red massive chert										
11.10	13.73	2.63	T	MSBS	massive basalt "grainy"										
13.73	14.53	0.80	T	MSCH	red and green massive chert										
14.53	16.74	2.21	S	FLBS	faulted basalt "grainy"										
16.74	29.50	12.76	F	MSBS	massive basalt "grainy"										
29.50	30.26	0.76	F	MSCH	red massive chert										
30.26	33.85	3.59	F	MSBS	massive basalt "grainy"										
33.85	34.33	0.48	F	MSCH	red massive chert										
					-trace malachite on fractures										
34.33	37.90	3.57	T	MSBS	massive basalt "grainy"										
37.90	40.54	2.64	T	MSCH	green-grey to pink massive chert										
40.54	45.10	4.56	F	MSBS	massive basalt "grainy"										
45.10	45.36	0.26	F	MSCH	massive red chert										
						45.10	45.36	0.26	N112963	92	4740	96	88	3.4	
45.36	65.07	19.71	F	MSBS	massive basalt "grainy"										
65.07	66.60	1.53	F	MSBS	broken massive basalt "grainy"										
66.60	81.00	14.40	F	MSBS	massive basalt "grainy"										
81.00	82.00	1.00	T	MSBS	broken massive basalt "grainy"										
82.00	89.30	7.30	F	MSBS	massive basalt "grainy"										
						86.06	87.30	1.24	N112964	100	85	27	84	<0.2	
						87.30	88.69	1.39	N112965	88	98	27	82	<0.2	
						88.69	89.30	0.61	N112966	100	78	31	84	0.2	
89.30	90.15	0.85	F	MSBS	altered massive basalt "grainy"										
						89.30	90.15	0.85	N112967	100	96	44	198	0.2	
90.15	92.10	1.95	F	HECH	red hematitic chert										
						90.15	90.98	0.83	N112968	100	341	59	688	2.4	
						90.98	92.10	1.12	N112969	100	1005	146	548	6.8	

*S-strong weathering, T-transitional weathering, F-fresh

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
92.10	94.64	2.54	F	PYSM	semi-massive sulphides										
					-40-50% pyrite	92.10	93.25	1.15	N112970	90	0.29%	415	2300	25.0	465
					-40-50% quartz and weak chalcopyrite	93.25	94.64	1.39	N112971	76	1.09%	791	810	28.8	270
94.64	99.30	4.66	F	SSSG	stringer sulphides										
					-basalt fragments	94.64	95.71	1.07	N112972	99	0.21%	285	4730	3.0	80
					-specular hematite-quartz-pyrite matrix	95.71	96.93	1.22	N112973	100	0.16%	284	3800	2.0	60
					-quartz-pyrite stringers	96.93	98.15	1.22	N112974	65	0.30%	348	3230	3.0	100
					-quartz-pyrite-chalcopyrite-red hematite stringers	98.15	99.30	1.15	N112975	82	0.49%	453	7950	6.8	265
99.30	101.70	2.40	F	SSSG	stringer sulphides										
					-contains more specular hematite than previous interval	99.30	100.43	1.13	N112976	100	0.46%	380	2860	3.6	140
						100.43	101.70	1.27	N112977	83	0.24%	99	3320	1.8	75
101.70	112.47	10.77	F	SSSG	stringer sulphides										
					-basalt fragments	101.70	103.33	1.63	N112978	90	0.40%	134	4700	3.2	150
					-specular-hematite-pyrite-quartz matrix	103.33	104.85	1.52	N112979	98	0.27%	109	1545	1.0	120
					-pyrite-quartz stringers (dominant)	104.85	106.38	1.53	N112980	92	0.35%	132	710	1.0	45
					-pyrite-quartz-chalcopyrite-red hematite stringers	106.38	107.90	1.52	N112981	87	0.41%	118	436	0.8	20
						107.90	109.42	1.52	N112982	100	0.67%	102	618	1.2	50
						109.42	110.95	1.53	N112983	100	0.39%	114	1330	1.0	35
						110.95	112.47	1.52	N112984	100	0.34%	140	826	0.8	30
112.47	120.09	7.62	F	SSSG	stringer sulphides										
					-basalt fragments (more than previous unit)	112.47	114.00	1.53	N112985	94	0.23%	155	954	1.0	75
					-specular hematite-quartz-pyrite matrix	114.00	115.52	1.52	N112986	100	0.43%	169	2390	1.6	90
					-pyrite-quartz stringers	115.52	117.04	1.52	N112987	92	0.24%	134	494	0.6	55
					-pyrite-quartz-chalcopyrite-red hematite stringers	117.04	118.57	1.53	N112988	100	050%	123	720	1.4	30
						118.57	120.09	1.52	N112989	91	1.61%	134	1190	2.4	65
120.09	125.50	5.41	F	CPSG	stringer sulphides										
					-basalt fragments	120.09	121.62	1.53	N112990	82	4.53%	567	6870	10.6	90
					-specular hematite-pyrite-quartz matrix	121.62	122.85	1.23	N112991	100	1.21%	351	2150	4.8	75
					-pyrite-quartz stringers	122.85	124.10	1.25	N112992	100	1.6%	391	1800	4.8	70
					-pyrite-quartz-chalcopyrite-red hematite stringers	124.10	125.50	1.40	N112993	92	0.66%	341	1525	5.2	50
125.50	127.23	1.73	F	HESG	hematitic stringers in breccia basalt										
					-basalt fragments	125.50	126.19	0.69	N112994	72	0.11%	98	292	0.6	50
					-specular hematite-pyrite matrix	126.19	127.23	1.04	N112995	57	0.63%	185	458	1.4	30

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-12 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
127.23	132.20	4.97	F	PYSG	pyrite stringer sulphides										
					-40% stringer sulphides	127.23	128.60	1.37	N112996	96	0.22%	513	132	1.2	60
					-50% semi-massive to massive pyrite	128.60	129.93	1.33	N112997	100	449	267	312	0.2	
						129.93	131.03	1.10	N112998	98	538	490	52	0.2	
						131.03	132.20	1.17	N112999	100	551	342	80	0.2	
132.20	134.72	2.52	F	BRBS	breccia basalt "aphanitic"										
					-maroon hematite dust in matrix	132.20	133.50	1.30	N113000	96	430	129	108	0.2	
					-locally pyritic	133.50	134.72	1.22	N113001	100	115	47	282	<0.2	
134.72	137.57	2.85	F	BRBS	breccia basalt with 10-15% pyrite "aphanitic"										
					-weak stringer zone	134.72	135.97	1.25	N113002	100	352	128	110	<0.2	
						135.97	137.57	1.6	N113003	100	131	120	54	0.4	
137.57	140.62	3.05	F	PYSG	pyrite stringer sulphides										
					-40-50% pyrite	137.57	138.97	1.40	N113004	100	296	659	34	1.0	
					-50% interstitial quartz	138.97	140.62	1.65	N113005	96	242	386	92	0.2	
140.62	141.43	0.81	F	BRBS	very altered breccia basalt										
					-gouged with calcite vein	140.62	141.43	0.81	N113006	100	61	63	96	<0.2	
141.43	146.72	5.29	F	CAVN	calcite vein										
					-minor contains rounded pyrite patches	141.43	142.95	1.52	N113007	94	37	22	56	<0.2	
					-fault zone	142.95	144.48	1.53	N113008	97	35	20	46	<0.2	
						144.48	145.82	1.34	N113009	95	69	26	82	<0.2	
						145.82	146.72	0.90	N113010	93	32	18	66	<0.2	
146.72	147.52	0.80	F	BRBS	broken breccia basalt "aphanitic"										
						146.72	147.52	0.80	N113011	100	85	25	86	<0.2	
147.52	161.64	14.12	F	FLBS	faulted breccia basalt "aphanitic/grainy"										
						147.52	148.44	0.92	N113012	49	52	24	64	<0.2	
						148.44	149.35	0.91	N113013	93	90	27	84	<0.2	
161.64	167.94	6.30	F	FLBS	broken breccia basalt										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-13 **Property:** ICE **Section:** 11,400 N

Easting:	*Northing:*	*Elevation:*	*Depth:*
376,943.16	6,862,786.67	1,283.25	149.05

Logger: Sefika Lesnikoff
Drilling Dates: June 21-24, 1997

Depth	0.00	27.13	87.93	136.55	
Azimuth	305	304	303	303	
Dip	-50	-51	-52	-53	
Method	Survey	Tropari	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	3.30	0.25	T	OBDH	overburden										
3.30	4.22	0.92	S	MSBS	weathered and broken massive basalt										
4.22	6.60	2.38	T	MSBS	massive basalt "grainy"										
6.60	8.56	1.96	T	MSCH	massive red chert										
8.56	24.00	15.44	T	MSBS	massive basalt "grainy"										
24.00	24.50	0.50	T	MSCH	broken massive red chert										
24.50	39.07	14.57	T	MSBS	massive basalt "grainy"										
39.07	66.32	27.25	F	MSBS	massive basalt "grainy"										
66.32	75.90	9.58	F	MSBS	broken massive basalt "grainy"										
75.90	88.62	12.72	F	MSBS	massive basalt "grainy"										
						85.04	85.92	0.88	N113014	102	61	24	74	<0.2	
						85.92	87.34	1.42	N113015	96	70	26	106	<0.2	
						87.34	88.62	1.28	N113016	100	96	35	138	<0.2	
88.62	89.00	0.38	F	HEMS	hematitic mudstone with sulphides										
					-includes altered basalt intervals	88.62	89.00	0.38	N113017	100	2130	185	240	0.6	
89.00	92.38	3.38	F	PYMS	pyritic massive sulphide breccia										
					-with pyrite±chalcopyrite clasts	89.00	90.02	1.02	N113018	90	0.18%	347	312	1.4	275
					-quartz-pyrite matrix	90.02	91.15	1.13	N113019	100	3.22%	1115	528	3.0	120
					-minor bornite	91.15	92.38	1.23	N113020	87	3.64%	1195	1175	18.4	470
92.38	95.15	2.77	F	PYMS	pyritic massive sulphide breccia with bornite										
					-pyrite±chalcopyrite clasts	92.38	93.72	1.34	N113021	100	8.13%	1110	1320	37.0	575
					-quartz matrix	93.72	95.15	1.43	N113022	100	5.44%	1535	10000	42.2	560
					-interstitial bornite										
95.15	101.00	5.85	F	PYMS	*pyritic massive sulphides*										
					-pyrite and chalcopyrite patches	95.15	96.29	1.14	N113023	92	8.43%	1305	10000	29.4	580
					-locally breccia texture	96.29	97.23	0.94	N113024	97	10.20%	1680	10000	14.0	390
					-interstitial bornite	97.23	98.76	1.53	N113025	77	7.96%	1040	2510	21.2	645
						98.76	99.97	1.21	N113026	100	7.58%	1010	8840	25.0	830
						99.97	101.00	1.03	N113027	103	7.48%	663	10000	20.0	765
101.00	104.12	3.12	F	BSPY	pyrite-porphyritic breccia basalt										
					-pyrite±chalcopyrite fragments	101.00	101.80	0.80	N113028	103	1.85%	223	5700	2.2	270

*S-strong weathering, T-transitional weathering, F-fresh

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-quartz-pyrite-chalcopyrite matrix	101.80	103.08	1.28	N113029	100	1.40%	139	514	1.4	70
						103.08	104.12	1.04	N113030	101	3.15%	348	2380	3.4	40
104.12	108.82	4.70	F	PHBS	porphyritic breccia basalt with pyrite										
					-basalt fragments	104.12	105.16	1.04	N113031	101	1.83%	365	448	1.4	
					-pyrite-chlorite matrix	105.16	106.68	1.52	N113032	95	1.21%	342	208	1.4	
						106.68	107.29	0.61	N113033	90	1.87%	228	176	4.0	
						107.29	108.82	1.53	N113034	63	1.06%	162	306	2.4	
108.82	120.93	12.11	F	SSSG	stringer sulphides in porphyritic basalt										
					-basalt fragments (50-60%)	108.82	109.78	0.96	N113035	100	1.08%	86	1505	2.4	
					-pyrite-quartz±specular hematite matrix	109.78	110.95	1.17	N113036	101	0.99%	192	1680	5.0	
					-quartz-pyrite-red hematite stringers	110.95	112.32	1.37	N113037	95	1.26%	201	2710	5.6	
					-quartz-pyrite-chalcopyrite±calcite stringers	112.32	114.00	1.68	N113038	91	2.51%	251	2090	10.2	
						114.00	115.52	1.52	N113039	97	1.82%	225	3130	7.2	
						115.52	117.04	1.52	N113040	103	3300	158	3970	2.4	
						117.04	118.57	1.53	N113041	92	1.60%	332	3310	5.8	
						118.57	119.79	1.22	N113042	88	2460	144	1400	1.0	
						119.79	120.93	1.14	N113043	96	3420	171	2680	1.4	
120.93	122.55	1.62	F	BRBS	slightly altered breccia basalt										
					-pale green aphanitic basalt	120.93	122.55	1.62	N113044	64	322	39	418	<0.2	
122.55	123.80	1.25	F	GGBS	gouged basalt										
						122.55	123.80	1.25	N113045	76	264	62	242	<0.2	
123.80	124.66	0.86	F	PYSG	very pyritic stringer sulphides										
					-weak stringer sulphides	123.80	124.66	0.86	N113046	99	408	537	94	0.2	
					-pyrite, quartz and altered basalt fragments										
124.66	127.00	2.34	F	ABSG	pale olive altered basalt with stringers										
					-35% pyrite-quartz stringers	124.66	126.19	1.53	N113047	82	305	359	94	0.2	
					-65% pale green to tan altered basalt	126.19	127.00	0.81	N113048	99	1055	249	104	0.2	
127.00	127.71	0.71	F	GGBS	gouged basalt										
						127.00	127.71	0.71	N113049	99	141	41	106	<0.2	
127.71	131.34	3.63	F	ABSG	pale olive altered basalt with stringers										
					-basalt fragments	127.71	129.24	1.53	N113050	93	346	231	102	0.2	
					-hematite-quartz-pyrite fragments	129.24	130.76	1.52	N113051	97	3540	145	138	0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-13 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-pyrite-quartz stringers	130.76	131.34	0.58	N113052	100	4280	98	192	0.4	
					-quartz-red hematite±pyrite stringers										
131.34	132.28	0.94	F	GGBS	gouged basalt										
						131.34	132.28	0.94	N113053	74	208	43	452	<0.2	
132.28	133.28	1.00	F	ABSG	pale olive altered basalt/stringers										
					-basalt fragments	132.28	133.28	1.00	N113054	89	106	55	790	0.2	
					-specular hematite-quartz matrix										
					-quartz-red hematite stringers										
133.28	141.04	7.76	F	CAVN	brecciated calcite vein - fault zone	133.28	134.15	0.87	N113055	99	266	33	324	<0.2	
					-pyrite bands or patches	134.15	135.33	1.18	N113056	68	31	19	126	<0.2	
						135.33	136.86	1.53	N113057	84	23	13	58	<0.2	
						136.86	138.23	1.37	N113058	104	50	15	104	<0.2	
						138.23	139.75	1.52	N113059	81	28	15	106	<0.2	
						139.75	141.04	1.29	N113060	100	69	19	100	<0.2	
141.04	144.48	3.44	F	BRBS	breccia basalt										
						141.04	142.10	1.06	N113061	99	92	37	92	<0.2	
						142.10	143.10	1.00	N113062	88	96	29	82	<0.2	
144.48	149.05	4.57	F	BRBS	very broken breccia basalt										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-14 | Property: ICE | Section: 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Bryan Gay
376,987.63	6,862,691.30	1,264.03	192.02	Drilling Dates:	June 21-27, 1997

Depth	0.00	53.00	105.00	159.00
Azimuth	309	309	299	294
Dip	-51	-51	-52	-51
Method	Survey	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	13.71	11.27	T	OBDH	polylithic overburden										
13.71	15.88	2.17	T	RBCH	green-grey ribbon chert										
15.88	20.63	4.75	F	CBMS	interbedded mudstone and sandstone										
20.63	22.86	2.23	F	FBCH	faulted, breccied and gouged chert										
22.86	25.94	3.08	F	MSBS	fractured massive basalt "grainy"										
25.94	33.45	7.51	F	MSBS	veined massive basalt "grainy"										
33.45	33.90	0.45	F	MSCH	green and red massive chert										
33.90	40.97	7.07	F	MSBS	massive basalt "grainy"										
40.97	41.80	0.83	T	MSCH	maroon massive chert										
41.80	107.14	65.34	F	MSBS	massive basalt "grainy"										
					-patchy hematite coating on fractures	103.22	104.25	1.03	N113063	100	91	29	98	<0.2	
						104.25	105.47	1.22	N113064	90	149	36	114	0.2	
						105.47	107.14	1.67	N113065	68	107	35	224	0.4	
107.14	109.63	2.49	F	HECH	pyrite flooded hematitic chert										
					-trace amounts of chalcopyrite in fractures and matrix	107.14	108.12	0.98	N113066	100	0.24%	70	1980	13.0	300
						108.12	108.93	0.81	N113067	100	0.59%	270	16040	22.0	480
						108.93	109.63	0.70	N113068	46	0.36%	55	820	3.0	90
109.63	114.25	4.62	F	PYMS	pyritic massive sulphide breccia										
					-massive autobrecciated pyrite	109.63	111.16	1.53	N113069	100	2.82%	420	945	8.0	355
					-minor disseminated chalcopyrite in the matrix	111.16	112.78	1.62	N113070	100	2.68%	840	795	16.0	505
					and in calcite-quartz veinlets	112.78	114.25	1.47	N113071	100	1.86%	760	465	10.0	340
114.25	120.92	6.67	F	PHBS	porphyritic breccia basalt "grainy"										
						114.25	115.82	1.57	N113072	94	323	23	140	<0.2	
						115.82	117.35	1.53	N113073	98	324	21	120	<0.2	
						117.35	118.87	1.52	N113074	95	298	21	124	<0.2	
120.92	148.85	27.93	F	BRBS	breccia basalt "aphanitic"										
						144.08	145.73	1.65	N113075	90	87	27	80	<0.2	
						145.73	147.18	1.45	N113076	101	77	25	72	<0.2	
						147.18	148.85	1.67	N113077	89	71	32	82	<0.2	
148.85	174.49	25.64	F	SSSG	weak stringer sulphides										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-14 Property: ICE

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-basalt fragments make up 70% of interval	148.85	150.57	1.72	N113078	90	0.45%	82	260	1.2	
					-matrix consists of quartz-specular hematite-magnetite-	150.57	151.79	1.22	N113079	100	1120	101	94	0.8	
					-pyrite and minor chalcopyrite	151.79	153.23	1.44	N113080	100	281	97	54	0.2	
					-quartz-pyrite stringers make up 20% of interval	153.23	154.53	1.30	N113081	100	405	88	792	0.6	
						154.53	156.06	1.53	N113082	101	0.36%	131	120	1.2	
						156.06	157.58	1.52	N113083	95	648	114	34	0.4	
						157.58	159.41	1.83	N113084	88	477	99	30	0.2	
						159.41	160.93	1.52	N113085	95	207	106	20	0.2	
						160.93	162.00	1.07	N113086	100	315	130	58	0.2	
						162.00	163.53	1.53	N113087	88	587	141	92	0.4	
						163.53	164.99	1.46	N113088	94	1280	213	258	0.6	
						164.99	166.57	1.58	N113089	100	1130	240	376	0.2	
						166.57	168.02	1.45	N113090	99	482	288	1015	0.6	
						168.02	169.57	1.55	N113091	100	350	188	3780	0.8	
						169.57	170.90	1.33	N113092	100	1920	132	904	1.0	
						170.90	172.52	1.62	N113093	90	1350	108	1460	1.0	
						172.52	173.51	0.99	N113094	97	1985	117	5090	1.8	
						173.51	174.49	0.98	N113098	100	483	99	666	<0.2	
174.49	192.02	17.53	F	BRBS	breccia basalt "aphanitic"										
						174.49	175.94	1.45	N113095	100	110	33	110	<0.2	
						175.94	177.47	1.53	N113096	97	89	28	80	<0.2	
						177.47	178.95	1.48	N113097	86	91	27	70	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-15 | **Property:** ICE | **Section:** 11,450 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,975.15	6,862,827.60	1,283.68	127.71	Sefika Lesnikoff	June 25-28, 1997

Depth	0.00	27.13	72.85	118.57
Azimuth	305	307	303	300
Dip	-49	-49	-50	-50
Method	Survey	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.12	0.90	T	MSCH	grey to red massive chert										
2.12	7.60	5.48	T	MSBS	massive basalt "grainy"										
7.60	8.77	1.17	T	MSCH	red massive chert										
8.77	13.30	4.53	T	MSBS	massive basalt "grainy"										
13.30	14.27	0.97	S	MSBS	veined massive basalt "grainy"										
					-calcite veins										
14.27	15.75	1.48	T	MSBS	massive basalt "grainy"										
15.75	17.73	1.98	T	MSCH	red-grey massive chert										
17.73	27.50	9.77	F	MSBS	massive basalt "grainy"										
					-contains some gouges areas										
					-locally contains small chlorite amygdules										
27.50	37.15	9.65	F	MSBS	massive basalt "grainy"										
					-contains broken core and slickensides										
37.15	43.59	6.44	F	MSBS	massive basalt "grainy"										
					-minor small chlorite amygdules										
43.59	45.11	1.52	F	MSBS	veined massive basalt "grainy"										
					-calcite veins										
45.11	51.57	6.46	F	MSBS	massive basalt "grainy"										
51.57	53.64	2.07	F	MSCH	red, green, grey massive chert										
53.64	63.12	9.48	F	BRBS	breccia basalt "grainy"										
63.12	72.42	9.30	F	MSBS	massive basalt "grainy"										
72.42	73.32	0.90	F	MSBS	veined massive basalt "grainy"										
					-epidote-quartz veined										
73.32	93.06	19.74	F	MSBS	massive basalt "grainy"										
93.06	96.10	3.04	F	CAVN	brecciated calcite-quartz vein - fault zone										
96.10	99.20	3.10	F	PHBS	porphyritic basalt "aphanitic"										
99.20	101.19	1.99	F	GGBS	gouged basalt										
101.19	127.71	26.52	F	FLBS	faulted breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-16 **Property:** ICE **Section:** 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,988.57	6,862,690.81	1,264.04	193.85	Bryan Gay	June 27-July 2, 1997

Depth	0.00	53.64	99.36	156.97	189.28
Azimuth	310	305	305	305	305
Dip	-75	-76	-76	-76	-76
Method	Survey	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	8.69	5.64	T	OBDH	polylithic overburden										
8.69	46.53	37.84	F	RBCH	green-grey ribbon chert										
					-approximately 23 m is cave material										
46.53	48.20	1.67	F	GGMS	carbonaceous fault gouge										
48.20	74.52	26.32	F	MSBS	massive basalt "grainy"										
74.52	75.84	1.32	F	MSCH	red massive chert with basalt bands										
75.84	118.41	42.57	F	MSBS	massive basalt "grainy"										
118.41	128.37	9.96	F	BRBS	breccia basalt "aphanitic"										
						127.10	128.37	1.27	N113099	94	111	25	112	<0.2	
128.37	128.78	0.41	F	HECH	hematitic chert										
						128.37	128.78	0.41	N113100	100	55	11	30	<0.2	
128.78	130.19	1.41	F	MSBS	massive basalt "aphanitic"										
						128.78	130.19	1.41	N113101	92	125	37	158	<0.2	
130.19	130.68	0.49	F	HECH	hematitic chert										
					chalcopyrite rich veinlets with pyrite near lower contact	130.19	130.68	0.49	N113102	92	2160	63	198	0.2	
130.68	135.45	4.77	F	PYMS	pyritic massive sulphide										
					-60-70% interlocking and disseminated pyrite with	130.68	132.29	1.61	N113103	99	2.71%	760	500	13.0	360
					minor chalcopyrite both disseminated and in splashes	132.29	133.88	1.59	N113104	101	2.86%	550	1195	10.0	380
					- ~ 25% quartz gangue	133.88	135.45	1.57	N113105	103	3.32%	910	4100	8.0	430
135.45	136.23	0.78	F	HECH	laminated hematitic chert										
					-alternating 0.1-4 cm laminae of hematitic chert and pyrite	135.45	136.23	0.78	N113106	83	1.35%	296	4560	3.0	440
136.23	140.24	4.01	F	PHBS	porphyritic basalt breccia										
						136.23	137.87	1.64	N113107	95	318	27	106	<0.2	
						137.87	139.30	1.43	N113108	98	145	25	72	<0.2	
140.24	151.12	10.88	F	BRBS	breccia basalt "aphanitic"										
151.12	158.85	7.73	F	BRBS	tectonic breccia with gouge "aphanitic"										
158.85	170.47	11.62	F	BRBS	breccia basalt "aphanitic"										
170.47	171.75	1.28	F	BRBS	tectonic breccia with gouge "aphanitic"										
171.75	183.73	11.98	F	BRBS	breccia basalt "aphanitic"										
183.73	184.04	0.31	F	MSCH	green-grey massive chert										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-16 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
184.04	193.42	9.38	F	MSBS	massive basalt "grainy"										
193.42	193.85	0.43	F	MSCH	dark grey massive chert										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-17 | Property: ICE | Section: 11,450 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
377,008.59	6,862,800.53	1,274.61	132.28	Drilling Dates:	June 28-July 3, 1997

Depth	0.00	39.32	126.19		
Azimuth	307	306	305		
Dip	-50	-50	-50		
Method	Survey	Tropari	Tropari		

From (m)	To (m)	Interval (m)	•	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	10.97	10.97		CSDH	casing										
10.97	13.60	2.63	T	OBDH	overburden										
13.60	18.82	5.22	F	CBMS	carbonaceous mudstone interbedded with chert										
18.82	30.15	11.33	F	RBCH	green ribbon chert										
30.15	37.40	7.25	F	MSBS	massive basalt "grainy"										
37.40	40.32	2.92	F	MSCH	massive red chert										
40.32	65.93	25.61	F	MSBS	massive basalt "grainy"										
65.93	66.95	1.02	F	MSCH	massive red chert										
66.95	104.35	37.40	F	MSBS	massive basalt "grainy"										
					-at 104.09-104.35m rubble core - fault zone										
104.35	110.95	6.60	F	PHBS	*hematitic porphyritic breccia basalt*										
110.95	116.00	5.05	F	PHBS	porphyritic breccia basalt										
116.00	122.17	6.17	F	PHBS	*hematitic porphyritic breccia basalt*										
122.17	124.70	2.53	F	BRBS	broken breccia basalt "aphanitic"										
124.70	132.28	7.58	F	BRBS	breccia basalt "*aphanitic*"										
					EOH										

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-18 | **Property:** ICE | **Section:** 11,400 N

Easting:	Northing:	Elevation:	Depth:
376,944.59	6,862,749.36	1,267.19	178.31

Logger: Tanja Reszat
Drilling Dates: July 3-7, 1997

Depth	0.00	37.49	83.82	131.67
Azimuth	307	308	309	314
Dip	-44	-45	-46	-46
Method	Survey	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	12.19	9.14		OBDH	overburden										
12.19	16.10	3.91	T	CBMS	mudstone interbedded with black ribbon chert										
16.10	29.26	13.16	T	RBCH	light green-grey ribbon chert										
29.26	31.09	1.83	T	MSCH	dark grey massive chert										
31.09	39.20	8.11	T	MSBS	altered massive basalt "grainy"										
39.20	59.33	20.13	F	MSBS	massive basalt "grainy"										
59.33	86.16	26.83	F	MSBS	broken massive basalt "grainy"										
						84.84	86.16	1.32	N113110	95	92	32	112	0.2	
86.16	86.31	0.15	F	PYMS	massive sulphides										
					-massive pyrite with trace chalcopyrite	86.16	86.31	0.15	N113111	100	2.71%	506	406	2.0	
86.31	92.15	5.84	F	PHBS	porphyritic breccia basalt "aphanitic"										
						86.31	87.33	1.02	N113112	77	2220	32	176	0.4	
92.15	102.72	10.57	F	PHBS	porphyry rich breccia basalt "aphanitic"										
102.72	122.22	19.50	F	BRBS	breccia basalt "aphanitic"										
122.22	144.73	22.51	F	BRBS	breccia basalt "aphanitic"										
						140.49	141.88	1.39	N113135	94	80	29	86	<0.2	
						141.88	143.26	1.38	N113113	93	226	29	86	<0.2	
						143.26	144.73	1.47	N113114	100	138	33	132	<0.2	
144.73	149.00	4.27	F	SSSG	stringer sulphides "aphanitic"										
					-disseminated pyrite and trace chalcopyrite	144.73	146.30	1.50	N113115	100	4050	155	4750	6.0	
						146.30	147.83	1.54	N113116	100	272	65	4630	1.0	
						147.83	149.00	1.05	N113117	100	370	169	958	2.2	
149.00	152.04	3.04	F	BRBS	breccia basalt "aphanitic"										
						149.00	150.48	1.48	N113118	103	88	27	166	<0.2	
						150.48	152.04	1.56	N113119	93	1405	90	548	0.6	
152.04	168.24	16.20	F	HESG	hematite rich stringer sulphides "aphanitic"										
					-disseminated pyrite and trace chalcopyrite	152.04	153.53	1.49	N113120	81	872	175	536	0.8	
					-specular hematite dominates the matrix	153.53	154.85	1.32	N113121	95	406	139	166	0.2	
						154.85	156.05	1.20	N113122	101	79	236	86	0.4	
						156.05	157.42	1.37	N113123	96	132	124	98	0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-18 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						157.42	158.85	1.43	N113124	97	72	116	52	0.2	
						158.85	160.02	1.17	N113125	101	40	91	60	0.4	
						160.02	161.54	1.52	N113126	89	50	105	56	0.6	
						161.54	163.07	1.53	N113127	101	97	113	114	0.6	
						163.07	164.59	1.52	N113128	88	18	108	64	0.2	
						164.59	166.12	1.53	N113129	100	24	124	76	0.2	
						166.12	167.64	1.52	N113130	91	48	137	150	0.6	
						167.64	168.24	0.60	N113131	102	99	56	226	0.2	
168.24	178.31	10.07	F	BRBS	breccia basalt "aphanitic"										
						168.24	169.76	1.52	N113132	84	95	33	108	0.2	
						169.76	170.84	1.08	N113133	54	71	33	146	0.4	
						170.84	172.21	1.37	N113134	46	132	33	186	0.6	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-19 | Property: ICE | Section: 11,450 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,008.59	6,862,800.53	1,274.61	178.00	Sefika Lesnikoff	July 3-7, 1997

Depth	0.00	39.32	83.51	141.43	176.48
Azimuth	305	306	308	310	311
Dip	-69	-71	-73	-72	-70
Method	Tropari	Tropari	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	10.97	10.97		CSDH	casing										
10.97	22.14	11.17	F	RBCH	dark grey ribbon chert										
22.14	32.16	10.02	F	MSCH	massive green chert										
32.16	60.60	28.44	F	MSBS	massive basalt "grainy"										
60.60	60.96	0.36	F	MSCH	massive red chert with pyrite										
					-with massive sulphide bands	60.60	60.96	0.36	N113136	83	6360	41	70	<0.2	
60.96	64.73	3.77	F	MSBS	massive basalt "grainy"										
64.73	65.75	1.02	F	MSCH	massive red chert										
					-dull red in colour	64.73	65.75	1.02	N113137	100	83	12	24	<0.2	
65.75	93.90	28.15	F	MSBS	massive basalt "grainy"										
						89.61	91.13	1.52	N113138	86	91	24	72	<0.2	
						91.13	92.66	1.53	N113139	85	71	26	70	<0.2	
						92.66	93.90	1.24	N113140	100	143	31	168	<0.2	
93.90	95.45	1.55	F	PYMS	pyritic massive sulphides breccia										
					-with pyrite clasts in pyrite matrix	93.90	95.45	1.55	N113141	90	1.76%	731	744	4.6	350
					-chalcopyrite patches										
95.45	96.25	0.80	F	PYMS	brecciated sulphides										
					-with sulphide clasts in calcite cement	95.45	96.25	0.80	N113142	95	4.22%	507	794	20.4	710
					-lower contact - fault zone										
96.25	111.85	15.60	F	PHBS	porphyritic breccia basalt "aphanitic"										
					-with basalt fragments	96.25	97.65	1.40	N113143	91	408	23	72	<0.2	
					-chlorite matrix	97.65	98.76	1.11	N113144	100	333	22	78	<0.2	
						98.76	100.28	1.52	N113145	100	291	22	80	<0.2	
111.85	142.09	30.24	F	BRBS	breccia basalt "aphanitic"										
142.09	145.38	3.29	F	BRBS	red hematite breccia basalt "aphanitic"										
					-basalt fragments with hematite dust	142.09	142.95	0.86	N113146	86	62	31	96	<0.2	
					-chloritic matrix	142.95	144.48	1.53	N113147	100	36	32	90	<0.2	
						144.48	145.38	0.90	N113148	71	24	36	112	0.2	
145.38	161.14	15.76	F	SSSG	stringer sulphides										
					-40-45% basalt fragments	145.38	146.91	1.53	N113149	95	0.25%	103	900	1.4	20
					-minor chlorite matrix	146.91	148.44	1.53	N113150	92	0.88%	102	1115	2.8	30

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT Hole: ID97-19 Property: ICE
EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-20-25% specular hematite-quartz-pyrite±magnetite	148.44	149.96	1.52	N113151	100	0.23%	97	196	1.6	20
					matrix	149.96	151.49	1.53	N113152	96	1.07%	123	328	5.0	30
					-10% quartz-pyrite stringers	151.49	153.01	1.52	N113153	100	0.87%	120	492	3.8	30
					-20% quartz-pyrite-chalcopyrite stringers	153.01	154.53	1.52	N113154	98	1.29%	157	650	7.8	65
					-late calcite regular veins	154.53	156.06	1.53	N113155	99	1.16%	200	1965	7.4	50
						156.06	157.58	1.52	N113156	100	0.49%	118	2080	3.0	35
						157.58	158.95	1.37	N113157	88	0.54%	121	518	3.2	40
						158.95	159.72	0.77	N113158	100	0.92%	144	814	5.0	60
						159.72	161.14	1.42	N113159	87	0.20%	139	568	1.2	25
161.14	178.00	16.86	F	BRBS	breccia basalt "aphanitic"										
						161.14	162.76	1.62	N113160	96	95	27	96	<0.2	
						162.76	164.29	1.53	N113161	97	86	28	74	<0.2	
						164.29	165.81	1.52	N113162	91	79	28	74	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-20 | Property: ICE | Section: 11,400 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,995.03	6,862,748.79	1,263.21	156.97	Tanja Reszat	July 7-11, 1997

Depth	0.00	35.36	87.17	132.89
Azimuth	308	307	305	298
Dip	-66	-67	-66	-67
Method	Survey	Tropari	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	6.10	6.10		CSDH	casing										
6.10	9.75	3.65	T	OBDH	overburden										
9.75	16.86	7.11	F	RBCH	black ribbon chert with mudstone										
16.86	19.91	3.05	T	RBCH	greenish-grey ribbon chert										
19.91	22.24	2.33	T	RBCH	black ribbon chert										
22.24	37.23	14.99	T	RBCH	greenish-grey and black interbedded ribbon chert										
37.23	86.77	49.54	F	MSBS	massive basalt "grainy"										
						82.91	84.12	1.21	N113163	98	75	24	82	<0.2	
						94.12	85.65	1.53	N113164	84	73	25	84	<0.2	
						85.65	86.77	1.12	N113165	100	324	34	94	<0.2	
86.77	93.28	6.51	F	PYMS	pyritic massive sulphide breccia										
					-massive pyrite with disseminated chalcopyrite	86.77	87.78	1.01	N113166	105	3.12%	636	672	21.0	835
					and bornite along the fractures	87.78	89.36	1.58	N113167	97	4.57%	412	926	6.6	460
						89.36	90.53	1.17	N113168	99	7.23%	685	532	31.2	1165
						90.53	91.90	1.37	N113169	93	4.95%	275	1165	25.8	990
						91.90	93.28	1.38	N113170	98	3.41%	69	1100	18.2	725
93.28	94.32	1.04	F	HEMS	hematitic mudstone with pyrite bands										
					-layered pyrite bands	93.28	94.32	1.04	N113171	104	0.51%	53	720	1.4	305
94.32	110.18	15.86	F	PHBS	porphyritic breccia basalt "aphanitic"										
						94.32	95.86	1.54	N113172	92	457	19	150	<0.2	
						95.86	97.54	1.68	N113173	100	419	18	142	<0.2	
						97.54	99.21	1.67	N113174	87	301	21	114	<0.2	
110.18	134.32	24.14	F	BRBS	breccia basalt "aphanitic"										
						129.84	131.37	1.53	N113175	104	113	27	78	<0.2	
						131.37	132.82	1.45	N113176	92	93	26	82	<0.2	
						132.82	134.32	1.50	N113177	101	98	36	96	<0.2	
134.32	141.13	6.81	F	SGBS	weak stringers in breccia basalt "aphanitic"										
					-weak pyrite stringers with trace chalcopyrite	134.32	134.32	1.52	N113178	97	73	90	466	0.2	
						135.84	136.86	1.02	N113179	100	0.54%	258	168	0.8	20
						136.86	138.07	1.21	N113180	96	1.19%	463	74	2.2	55
						138.07	139.19	1.12	N113181	99	0.95%	140	166	1.2	35

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-20 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						139.19	139.90	0.71	N113182	70	1510	55	314	0.6	
						139.90	141.13	1.23	N113183	98	811	62	574	0.4	
141.13	151.95	10.82	F	BRBS	hematitic breccia basalt "aphanitic"										
					-fragments rimmed with hematitic dust	141.13	142.55	1.40	N113184	100	407	35	112	<0.2	
						142.55	144.05	1.55	N113185	100	89	28	96	<0.2	
						144.05	145.55	1.25	N113186	100	155	31	88	<0.2	
151.95	156.97	5.02	F	BSBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-21 | Property: ICE | Section: 11,450 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,088.77	6,862,752.03	1,263.21	155.45	Sefika Lesnikoff	July 8-13,1997

Depth	33.22	91.13	122.53		
Azimuth	304	309	306		
Dip	-51	-52	-51		
Method	Tropari	Tropari	Tropari		

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	6.10	6.10		CSDH	casing										
6.10	7.00	0.90		OBDH	overburden										
7.00	11.58	4.58	T	SDST	slightly weathered sandstone										
11.58	22.56	10.98	F	SDST	fresh sandstone										
22.56	27.13	4.57	F	CBMS	carbonaceous mudstone										
27.13	43.97	16.84	F	GGMS	gouged mudstone										
43.97	46.94	2.97	F	CBMS	carbonaceous mudstone										
46.94	57.61	10.67	F	MSCG	mudstone conglomerate										
57.61	61.73	4.12	F	MSCH	broken green massive chert										
61.73	64.23	2.50	F	RBCH	ribbon grey chert										
64.23	65.23	1.00	F	CBMS	carbonaceous mudstone										
65.23	66.73	1.50	F	RBCH	green ribbon chert										
66.73	70.55	3.82	F	RBCH	dark grey ribbon chert										
70.55	73.00	2.45	F	GGMS	gouged carboneous mudstone										
73.00	78.21	5.21	F	RBCH	black ribbon chert										
78.21	83.70	5.49	F	GGMS	gouged carboneous mudstone										
83.70	91.60	7.90	F	FLCH	faulted ribbon chert										
91.60	95.70	4.10	F	FLBS	faulted basalt										
95.70	107.44	11.74	F	MSBS	massive basalt "grainy"										
107.44	113.75	6.31	F	FBBS	fault breccia massive basalt "grainy"										
113.75	115.84	2.09	F	MSBS	massive basalt "grainy"										
115.84	116.42	0.58	F	MSCH	massive red chert										
116.42	132.57	16.15	F	FBBS	faulted massive basalt "grainy"										
132.57	134.12	1.55	F	PHBS	heavilly fractured porphyritic breccia basalt "aphanitic"										
134.12	155.45	21.33	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-22 | Property: ICE | Section: 11,400 N

	Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
	377,056.69	6,862,704.19	1,260.26	146.30	Tanja Reszat	July 11-15, 1997

Depth	0.00	53.34	135.63	
Azimuth	307	308	306	
Dip	-50	-51	-52	
Method	Survey	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	2.33	0.50	F	OBDH	overburden										
2.33	58.22	55.89	F	RBCH	ribbon chert interbedded with sandstone										
58.22	81.00	22.78	F	RBCH	black ribbon chert										
81.00	82.80	1.80	F	QZVN	quartz vein										
82.80	88.24	5.44	F	RBCH	black and greenish-grey chert										
88.24	92.96	4.72	F	MSBS	altered massive basalt "grainy"										
92.96	100.42	7.46	F	MSBS	massive basalt "grainy"										
100.42	114.71	14.29	F	FBBS	faulted breccia basalt "grainy"										
114.71	124.05	9.34	F	MSBS	massive basalt "grainy"										
124.05	132.02	7.97	F	FBBS	faulted breccia basalt "grainy"										
						128.25	129.59	1.34	N113187	97	59	27	102	<0.2	
						129.59	130.87	1.28	N113188	86	70	27	106	<0.2	
						130.87	132.02	1.15	N113189	100	605	49	128	<0.2	
132.02	134.44	2.42	F	PYMS	pyrite massive sulphide breccia										
					-massive pyrite with trace amounts of chalcopyrite	132.02	133.50	1.48	N113190	57	1.12%	757	364	3.6	380
						133.50	134.77	1.27	N113191	100	0.97%	547	580	4.8	420
						134.77	135.08	0.31	N113192	84	0.40%	498	468	3.2	370
134.44	145.18	10.74	F	PHBS	porphyritic breccia basalt "aphanitic"										
						135.08	136.61	1.53	N113193	87	213	29	116	<0.2	
						136.61	137.77	1.16	N113194	99	262	35	90	<0.2	
						137.77	138.99	1.22	N113195	80	107	24	70	<0.2	
145.18	146.30	1.12	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-23 | Property: ICE | Section: 11,450 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,089.01	6,862,751.88	1,263.33	271.73	Sefika Lesnikoff	July 13-19, 1997

Depth	8.84	169.77	215.49	261.82	
Azimuth	308	305	301	303	
Dip	-70	-70	-69	-69	
Method	Tropari	Tropari	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	6.10	6.10		CSDH	casing										
6.10	10.36	4.26	T	SDST	slightly weathered grey sandstone										
10.36	14.02	3.66	F	SDST	fresh grey sandstone										
14.02	32.10	18.08	F	CBMS	carbonaceous mudstone										
32.10	39.40	7.30	F	GGMS	gouged mudstone										
39.40	45.20	5.80	F	CBMS	broken carbonaceous mudstone										
45.20	47.16	1.96	F	GGMS	gouged carbonaceous mudstone										
47.16	55.10	7.94	F	RBCH	black and grey ribbon bedded chert										
55.10	65.25	10.15	F	RBCH	very broken green ribbon chert										
65.25	69.50	4.25	F	RBCH	broken green ribbon chert										
69.50	71.84	2.34	F	RBCH	dark grey to black ribbon chert										
71.84	74.37	2.53	F	MSBS	calcareous altered massive basalt "grainy"										
74.37	90.73	16.36	F	MSBS	altered massive basalt "grainy"										
90.73	91.80	1.07	F	MSCH	red massive chert										
91.80	94.60	2.80	F	MSBS	calcareous massive basalt "grainy"										
94.60	96.38	1.78	F	MSCH	massive green and red chert										
96.38	111.05	14.67	F	MSBS	massive basalt "grainy"										
111.05	113.00	1.95	F	MSCH	massive grey and red chert										
113.00	117.77	4.77	F	MSBS	massive basalt "grainy"										
117.77	119.23	1.46	F	MSCH	massive red chert										
119.23	152.88	33.65	F	MSBS	massive basalt "grainy"										
152.88	155.40	2.52	F	MSCH	massive red chert										
155.40	174.98	19.58	F	MSBS	epidote altered massive basalt "grainy"										
174.98	176.80	1.82	F	FBBS	faulted massive basalt "grainy"										
176.80	179.53	2.73	F	FBBS	faulted porphyritic breccia basalt										
179.53	187.70	8.17	F	FBBS	faulted massive basalt "grainy"										
187.70	188.94	1.24	F	CAVN	fault calcite vein										
188.94	194.26	5.32	F	BRBS	breccia basalt										
194.26	197.00	2.74	F	PHBS	faulted porphyritic breccia basalt										
197.00	221.40	24.40	F	BRBS	breccia basalt "aphanitic"										
221.40	222.20	0.80	F	CAVN	calcite vein										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-23 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
222.20	249.45	27.25	F	BRBS	silicified breccia basalt "aphanitic"										
249.45	251.96	2.51	F	BRBS	breccia basalt "aphanitic"										
251.96	271.73	19.77	F	BRBS	silicified breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: ID97-24 | Property: ICE | Section: 11,400 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,057.16	6,862,703.72	1,260.17	159.41	Tanja Reszat	July 15-20, 1997

Depth	0.00	17.07	47.24	132.74	
Azimuth	306	307	303	315	
Dip	-70	-69	-69	-70	
Method	Survey	Tropari	Tropari	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	4.27	4.27		CSDH	casing										
4.27	8.12	3.85	T	RBCH	greenish-grey ribbon chert										
8.12	29.57	21.45	F	RBCH	black ribbon chert										
29.57	38.45	8.88	F	GGCH	gouged and broken ribbon chert										
38.45	60.10	21.65	F	RBCH	black ribbon chert										
60.10	94.79	34.69	F	MSBS	massive basalt "grainy"										
94.79	147.93	53.14	F	MSCH	red massive chert										
95.94	147.93	51.99	F	MSBS	massive basalt "grainy"										
147.93	148.50	0.57	F	HECH	massive red chert with pyrite										
						147.93	148.50	0.57	N1132190	100	625	52	<0.2		
148.50	159.41	10.91	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-25 | Property: ICE | Section: 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,062.08	6,862,649.21	1,253.90	185.62	Tanja Reszat	July 20-25, 1997

Depth	0.00	181.36	
Azimuth	309	306	
Dip	-58	-59	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	7.92	7.92		CSDH	casing										
7.92	47.85	39.93	F	RBCH	black ribbon chert with sandstone										
47.85	54.30	6.45	F	RBCH	greenish-grey and black ribbon chert										
54.30	56.70	2.40	F	MSBS	massive altered basalt										
56.70	71.75	15.05	F	RBCH	gouged green-grey and black ribbon chert										
71.75	73.90	2.15	F	MSBS	altered massive basalt "grainy"										
73.90	135.14	61.24	F	MSBS	massive basalt "grainy"										
135.14	137.57	2.43	F	MSCH	red massive chert										
						135.14	136.55	1.41	N113720	91	114	4	18	<0.2	
						165.55	137.57	1.02	N113721	100	58	3	46	<0.2	
137.57	151.39	13.82	F	MSBS	massive basalt "grainy"										
151.39	155.10	3.71	F	BRBS	tectonic breccia basalt "grainy"										
155.10	185.62	30.52	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-26 | Property: ICE | Section: 11,500 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
377,047.65	6,862,843.32	1,271.01	164.59	Bryan Gay	July 26-31, 1997

Depth	0.00	91.44	163.07
Azimuth	301	298	295
Dip	-70	-71	-72
Method	Survey	Tropari	Tropari

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	9.45	9.45		CSDH	casing										
9.45	9.75	0.30	S	OBDH	overburden										
9.75	18.59	8.84		LCDH	lost core - no recovery										
18.59	23.77	5.18	T	RBCH	dark grey ribbon chert										
23.77	27.43	3.66		LCDH	lost core - no recovery										
27.43	29.26	1.83	T	MSCH	green massive chert										
29.26	33.80	4.54	S	GGCH	fault gouge with chert clasts										
33.80	88.33	54.53	F	MSBS	massive basalt "grainy"										
					-minor disseminated pyrite along chloritic fractures	83.49	85.03	1.54	N113294	103	81	26	76	<0.2	
						85.03	86.67	1.64	N113295	91	100	27	74	<0.2	
						86.67	88.33	1.66	N113296	86	103	29	98	<0.2	
88.33	88.58	0.25	F	HECH	hematitic chert										
					-trace disseminated pyrite	88.33	88.58	0.25	N113297	100	0.04%	20	440	<0.2	90
88.58	91.70	3.12	F	PYMS	pyritic massive sulphide breccia										
					-60-70% fine to medium grained pyrite	88.58	90.19	1.61	N113298	96	0.56%	235	1310	5.0	665
					-trace disseminated chalcopyrite	90.19	91.70	1.51	N113299	101	3.91%	1005	1085	10.0	680
					-20-25% quartz gangue										
91.70	94.18	2.48	F	PHBS	porphyritic basalt breccia										
					-trace chalcopyrite as fine strands	91.70	92.96	1.26	N113300	88	220	29	74	<0.2	
					in calcite-quartz-hematite veinlets	92.96	94.18	1.22	N113301	90	154	29	74	<0.2	
94.18	164.59	70.41	F	BRBS	breccia basalt "aphanitic"										
					-trace pyrite in matrix and chloritic fractures	94.18	95.55	1.37	N113302	98	68	31	74	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: ID97-27 | *Property:* ICE | *Section:* 11, 450 N

Easting:	*Northing:*	*Elevation:*	*Depth:*	*Logger:*	*Drilling Dates:*
376,927.30	6,862,859.43	1,301.86	110.03	Tanja Reszat	July 30- Aug 4, 1997

Depth	0.00	182.30	
Azimuth	309	308	
Dip	-51	-50	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	8.80	6.36	T	OBDH	overburden										
8.80	9.51	0.71	T	MSBS	massive basalt "grainy"										
9.51	10.37	0.86	T	MSCH	red massive chert										
10.37	17.18	6.81	T	MSBS	massive basalt "grainy"										
17.18	21.03	3.85	F	MSCH	red and grey massive chert										
21.03	45.60	24.57	T	MSBS	massive basalt "grainy"										
45.60	46.70	1.10	T	PHBS	porphyritic breccia basalt "aphanitic"										
46.70	49.99	3.29	T	FLBS	faulted and gouged breccia basalt "aphanitic"										
49.99	93.94	43.95	F	BRBS	breccia basalt "aphanitic"										
93.94	110.03	16.09	F	MSBS	massive basalt "grainy/aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	ID97-28	Property:	ICE	Section:	11,200 N
Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,846.45	6,862,608.69	1,266.61	145.69	Drilling Dates:	Aug 1-5, 1997

Depth	0.00
Azimuth	307
Dip	-50
Method	Survey

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	4.72	3.50	T	MSBS	epidote altered broken massive basalt "grainy"										
4.72	5.68	0.96	F	MSCH	grey massive chert										
5.68	24.23	18.55	T	MSBS	epidote altered massive basalt "grainy"										
24.23	24.78	0.55	F	CRVN	carbonate-quartz vein										
24.78	67.12	42.34	F	MSBS	epidote altered massive basalt "grainy"										
67.12	69.66	2.54	F	BRBS	breccia basalt "aphanitic"										
69.66	76.62	6.96	F	PHBS	porphyritic breccia basalt "aphanitic"										
76.62	93.42	16.80	F	BRBS	breccia basalt "aphanitic"										
93.42	94.66	1.24	F	BRBS	breccia basalt "aphanitic"										
					-with minor pyrite and trace chalcopyrite	93.42	94.66	1.24	N113371	89	3750	34	240	0.8	
94.66	101.46	6.80	F	BRBS	breccia basalt "aphanitic"										
					-irregular pyrite±quartz veins	99.94	100.60	0.66	N113372	100	191	35	660	<0.2	
					-with depth pyrite and chalcopyrite increase	100.60	101.46	0.86	N113373	85	0.17%	32	330	0.2	
101.46	107.75	6.29	F	BSPY	pyrite with basalt fragments "aphanitic"										
					-basalt fragments	101.46	102.76	1.30	N113374	94	1.11%	32	196	2.0	
					-chlorite matrix	102.76	104.01	1.25	N113375	93	0.76%	39	230	1.6	
					-chlorite-pyrite stringers	104.01	104.85	0.84	N113376	100	2.10%	56	206	5.6	
					-pyrite-chalcopyrite-epidote-calcite stringers	104.85	106.38	1.53	N113377	98	0.49%	42	204	0.8	
						106.38	107.75	1.37	N113378	88	0.52%	40	276	1.2	
107.75	122.00	14.25	F	SSSG	stringer sulphides										
					-basalt fragments	107.75	109.35	1.60	N113379	100	945	98	150	0.6	
					-specular hematite-pyrite-quartz±chlorite matrix	109.35	110.95	1.60	N113380	98	652	112	340	0.6	
					-pyrite-quartz stringers	110.95	112.32	1.37	N113381	94	296	115	282	0.2	
					-quartz-pyrite-chalcopyrite stringers	112.32	113.08	0.76	N113382	99	608	57	258	0.6	
						113.08	114.60	1.52	N113383	100	183	86	308	0.6	
						114.60	115.82	1.22	N113384	77	81	136	98	0.2	
						115.82	117.30	1.48	N113385	82	61	231	104	0.6	
						117.30	118.87	1.57	N113386	61	32	213	132	<0.2	
						118.87	120.09	1.22	N113387	20	459	124	104	<0.2	
						120.09	120.70	0.61	N113388	36	113	165	2200	0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-28 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						120.70	122.00	1.30	N113389	57	32	143	1020	<0.2	
122.00	126.24	4.24	F	SSSG	stringer sulphides										
					-basalt fragments	122.00	123.14	1.14	N113390	95	151	178	1400	0.2	
					-specular hematite-quartz-pyrite matrix	123.14	124.36	1.22	N113391	94	134	169	582	0.2	
					-quartz-pyrite stringers	124.36	125.27	0.91	N113392	80	181	399	386	0.4	
						125.27	126.24	0.97	N113393	79	358	232	556	0.4	
126.24	127.40	1.16	F	PYSM	semi-massive sulphides										
					-massive sulphides 125.00-125.27m	126.24	127.40	1.16	N113394	97	543	344	1085	1.6	
127.40	128.47	1.07	F	SGBS	weak stringer sulphides										
					-basalt fragments	127.40	128.47	1.07	N113395	96	0.26%	60	778	1.4	
					-quartz-pyrite±red hematite stringers										
128.47	131.15	2.68	F	PYSM	semi-massive sulphides										
					-50-60% massive pyrite	128.47	129.24	0.77	N113396	100	0.99%	455	232	2.8	40
					-minor chalcopyrite	129.24	130.26	1.02	N113397	100	2.16%	783	1020	7.6	80
						130.26	131.15	0.89	N113398	100	2.27%	876	452	7.0	65
131.15	133.72	2.57	F	SGBS	weak stringer sulphides										
					-basalt fragments	131.15	132.28	1.13	N113399	94	0.56%	246	2630	1.4	
					-chlorite matrix	132.28	133.72	1.44	N113400	85	0.20%	151	108	0.8	
					-quartz-pyrite stringers										
133.72	137.55	3.83	F	FLBS	faulted basalt										
						133.72	134.87	1.15	N113401	72	233	38	276	<0.2	
						134.87	136.25	1.38	N113402	73	160	37	102	<0.2	
137.55	140.86	3.31	F	SHBS	sheared basalt										
140.86	145.69	4.83	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-29 | Property: ICE | Section: 11, 400 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Tanja Reszat
376,884.28	6,862,832.24	1,302.74	63.09	Drilling Dates:	Aug 4-6, 1997

Depth	0.00
Azimuth	306
Dip	-48
Method	Survey

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	5.80	2.75	S	OBDH	overburden										
5.80	8.23	2.43	S	MSBS	massive basalt "grainy"										
8.23	9.30	1.07	T	HEMS	hematitic mudstone										
9.30	12.71	3.41	S	MSBS	massive basalt "grainy"										
12.71	45.91	33.20	F	MSBS	massive basalt "grainy"										
45.91	50.00	4.09	F	PHBS	porphyritic breccia basalt "aphanitic"										
50.00	53.54	3.54	F	PHBS	altered breccia basalt "aphanitic"										
53.54	58.74	5.20	F	PHBS	porphyritic breecia basalt "aphanitic"										
58.74	63.09	4.35	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-30 | **Property:** ICE | **Section:** 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,796.72	6,862,706.63	1,295.49	103.02

Logger: Sefika Lesnikoff
Drilling Dates: Aug 5-8, 1997

Depth	0.00
Azimuth	306
Dip	-47
Method	Survey

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		OBDH	overburden										
1.22	5.08	3.86	S	MSBS	massive basalt "grainy"										
5.08	20.20	15.12	S	MSBS	massive basalt "grainy"										
						17.83	18.90	1.07	113403	93	77	32	78	<0.2	
						18.90	19.17	0.27	113404	100	1315	164	118	1.0	
20.20	24.84	4.64	F	MSBS	massive basalt "grainy"										
						23.77	24.84	1.07	113405	100	58	39	138	<0.2	
24.84	29.30	4.46	F	FLBS	faulted massive basalt "grainy"										
					-with massive sulphide and red chert fragments	24.84	25.76	0.92	113406	55	74	41	172	<0.2	
						25.76	27.13	1.37	113407	89	565	76	1025	3.0	
						27.13	28.65	1.52	113408	55	0.87%	143	3650	6.4	175
						28.65	29.30	0.65	113418	100	0.07%	128	3140	<0.2	<5
29.30	29.90	0.60	T	HEMS	broken hematitic mudstone										
					-with 2-3 cm massive sulphide bands	29.30	29.90	0.60	113409	100	0.70%	130	3440	2.0	50
29.90	39.65	9.75	T	PYMS	massive sulphides										
					-dominated by pyrite and interstitial quartz	29.90	30.66	0.76	113410	100	4.81%	515	2350	13.0	260
					-fine grained chalcopyrite	30.66	31.70	1.04	113411	91	2.56%	640	1405	16.0	380
					-the first meter has chalcocite on fractures	31.70	33.22	1.52	113412	92	2.43%	745	2610	14.0	245
						33.22	34.75	1.53	113413	95	3.25%	1015	2390	7.0	405
						34.75	36.27	1.52	113414	90	2.77%	910	10850	7.0	425
						36.27	37.80	1.53	113415	95	1.90%	715	5390	5.0	380
						37.80	38.94	1.14	113416	100	1.58%	575	5910	5.0	325
						38.94	39.65	0.71	113417	100	3.16%	805	3610	8.0	475
39.65	51.66	12.01	F	FLBS	faulted massive basalt "grainy"										
					-broken calcite vein at 48.50 m	39.65	41.72	2.07	113419	70	1.56%	211	3160	1.2	80
						41.72	42.92	1.20	113420	100	0.19%	136	488	0.6	50
						42.92	43.89	0.97	113421	100	312	43	184	<0.2	
						43.89	44.96	1.07	113422	100	113	41	120	<0.2	
51.66	52.70	1.04	F	MSBS	massive basalt "grainy"										
52.70	55.80	3.10	F	FLBS	clay altered faulted basalt										
55.80	56.95	1.15	F	PHBS	broken porphyritic basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-30 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
56.95	69.80	12.85	F	PHBS	porphyritic basalt "aphanitic"										
69.80	81.76	11.96	F	BRBS	breccia basalt "aphanitic"										
						80.92	81.76	0.84	113423	76	557	43	1630	1.2	
81.76	83.76	2.00	F	SSSG	stringer sulphides										
					-basalt fragments	81.76	82.45	0.69	113424	96	248	70	342	1.2	
					-40% stringer sulphides	82.45	83.76	1.31	113425	66	337	51	1420	0.6	
83.76	85.55	1.79	F	PHBS	porphyritic basalt "aphanitic"										
						83.76	84.73	0.97	113426	81	202	32	4820	0.6	
85.55	89.20	3.65	F	BRBS	breccia basalt "aphanitic"										
						87.63	88.39	0.76	113427	97	202	39	576	<0.2	
						88.39	89.20	0.81	113428	68	1320	46	926	0.4	
89.20	91.05	1.85	F	SGBS	weak stringer sulphides										
					-basalt fragments	89.20	90.04	0.84	113429	95	1595	46	1545	1.4	
					-pyrite-chalcopyrite±epidote stringers	90.04	91.05	1.01	113430	95	604	41	1195	1.0	
91.05	103.02	11.97	F	BRBS	breccia basalt "aphanitic"										
						91.05	92.66	1.61	113431	91	126	30	174	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-31 | Property: ICE | Section: 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,855.63	6,862,788.80	1,300.87	100.89	Tanja Reszat	Aug 6-9, 1997

Depth	0.00	99.36	
Azimuth	309	308	
Dip	-50	-51	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	6.40	3.96	T	MSBS	massive basalt "grainy"										
6.40	16.50	10.10	T	FLBS	faulted and gouged massive basalt "grainy"										
16.50	46.02	30.15	F	MSBS	massive basalt "grainy"										
						43.28	44.50	1.22	N113751	86	189	64	666	<0.2	
						44.50	46.02	1.52	N113452	100	0.26%	87	2320	<0.2	<5
46.02	46.65	0.63	F	PYMS	massive pyritic sulphide										
					-trace chalcopyrite	46.02	46.65	0.63	N113453	100	3.42%	413	720	6.2	440
46.65	47.83	1.18	T	FLBS	faulted and gouged breccia basalt "aphanitic"										
						46.65	47.83	1.18	N113454	93	4.11%	82	2700	0.6	<5
47.83	58.83	11.00	F	PHBS	porphyritic breccia basalt "aphanitic"										
						47.83	49.07	1.24	N113752	68	0.94%	166	5720	<0.2	
						49.07	50.29	1.22	N113753	74	0.40%	118	3960	<0.2	
						50.29	52.12	1.83	N113754	78	1490	147	3090	<0.2	
58.83	64.82	5.99	F	BRBS	breccia basalt "aphanitic"										
						63.38	64.82	1.44	N113451	100	92	31	1340	0.2	
64.82	81.28	16.46	F	BRBS	breccia basalt with weak pyrite "aphanitic"										
					-chlorite-calcite-pyrite-chalcopyrite matrix	64.82	66.14	1.32	N113432	93	64	27	76	<0.2	
						66.14	67.36	1.22	N113433	100	87	27	84	<0.2	
						67.36	68.88	1.52	N113434	88	79	27	80	<0.2	
						68.88	70.41	1.53	N113435	78	185	32	438	<0.2	
						70.41	71.93	1.52	N113436	100	252	31	688	<0.2	
						71.93	73.46	1.53	N113437	86	409	33	732	0.2	
						73.46	74.98	1.52	N113438	62	129	30	464	<0.2	
						74.98	76.50	1.52	N113439	93	133	31	104	<0.2	
						76.50	78.03	1.53	N113440	100	69	29	88	<0.2	
						78.03	79.25	1.22	N113441	32	69	33	106	<0.2	
						79.25	80.16	0.91	N113442	46	111	30	84	<0.2	
						80.16	81.28	1.12	N113443	96	80	31	136	<0.2	
81.23	86.05	4.82	F	SGBS	breccia basalt with stringers in matrix "aphanitic"										
					-weak pyrite and trace chalcopyrite in matrix	81.28	82.68	1.40	N113444	100	146	29	438	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-31 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						82.68	84.12	1.44	N113445	94	1335	34	596	0.8	
						84.12	85.07	0.95	N113446	97	0.34%	33	286	2.0	
						85.07	86.05	0.98	N113447	76	1200	33	346	0.8	
						86.05	87.17	1.12	N113448	100	148	30	848	0.6	
						87.17	88.85	1.68	N113449	62	228	43	1.83%	4.4	
86.05	92.51	6.46	F	BRBS	breccia basalt "aphanitic"										
						88.85	90.37	1.52	N113450	97	110	26	164	<0.2	
92.51	100.89	8.38	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-32 | Property: ICE | Section: 11,550 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
377,085.96	6,862,880.68	1,273.68	111.25	Drilling Dates:	Aug 10-13, 1997

Depth	0.00	109.73	
Azimuth	306	304	
Dip	-73	-72	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	9.14	9.14		CSDH	casing											
9.14	11.30	2.16		OBDH	overburden											
11.30	13.50	2.20	T	SDST	sandstone											
13.50	15.54	2.04	F	MSCH	grey to black massive chert											
15.54	19.51	3.97	F	MSCH	grey massive chert											
19.51	41.45	21.94	F	RBCH	ribbon bedded chert											
41.45	45.83	4.38	F	FLMS	faulted mudstone											
45.83	49.07	3.24	F	FLCH	faulted dark grey chert											
49.07	59.74	10.67	F	FLCH	faulted green chert											
59.74	61.26	1.52	F	FLBS	faulted massive basalt	"grainy"										
61.26	72.54	11.28	F	MSBS	heavilly fractured massive basalt	"grainy"										
72.54	78.68	6.14	F	MSBS	massive basalt	"grainy"										
78.68	81.44	2.76	F	PHBS	porphyrytic basalt	"aphanitic"										
81.44	93.67	12.23	F	BRBS	breccia basalt	"aphanitic"										
93.67	111.25	17.58	F	BRBS	breccia basalt	"aphanitic"										
					EOH											

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-33 Property: ICE Section: 11,500 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
377,117.54	6,862,781.27	1,264.21	158.80	Drilling Dates:	Aug 13-16, 1997

Depth	0.00	157.28	
Azimuth	306	304	
Dip	-49	-52	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	9.76	9.76		CSDH	casing											
9.76	10.06	0.30		OBDH	overburden											
10.06	30.48	20.42	F	SDST	sandstone											
					-interlaminated with carbonaceous mudstone											
30.48	37.10	6.62	F	RBCH	grey to black ribbon chert											
37.10	46.94	9.84	F	SDST	sandstone											
					-interlaminated with carbonaceous mudstone											
46.94	54.97	8.03	F	RBCH	grey to black ribbon chert											
54.97	58.83	3.86	F	FLMS	faulted mudstone											
58.83	59.74	0.91	F	SDST	sandstone											
59.74	63.00	3.26	F	GGCG	gouged mudstone conglomerate											
63.00	64.31	1.31	F	RBCH	green ribbon chert											
64.31	79.55	15.24	F	RBCH	grey to black ribbon chert											
79.55	90.65	11.10	F	RBCH	green ribbon chert											
90.65	98.33	7.68	F	RBCH	grey ribbon chert											
98.33	99.74	1.41	F	MSBS	altered broken massive basalt											
99.74	101.04	1.30	F	MSCH	broken massive grey chert											
101.04	113.00	11.96	F	MSBS	tectonized massive basalt	"grainy"										
113.00	114.30	1.30	F	MSCH	red massive chert											
114.30	124.55	10.25	F	MSBS	massive basalt	"grainy"										
124.55	132.39	7.84	F	MSBS	tectonized massive basalt	"grainy"										
132.39	134.02	1.63	F	MSCH	broken massive red chert											
134.02	135.44	1.42	F	MSBS	tectonized massive basalt	"grainy"										
135.44	137.02	1.58	F	MSCH	black and red massive chert											
137.02	141.78	4.76	F	MSBS	tectonized massive basalt	"grainy"										
141.78	142.20	0.42	F	MSCH	grey and red massive chert											
142.20	143.70	1.50	F	MSBS	tectonized massive basalt	"grainy"										
143.70	151.67	7.97	F	PHBS	tectonized porphyritic basalt	"aphanitic"										
151.67	158.80	7.13	F	BRBS	heavily fractured breccia basalt	"aphanitic"										
					EOH											

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-34 | Property: ICE | Section: 11200N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,887.17	6,862,577.13	1,254.21	168.55	Drilling Dates:	August 17-20, 1997

Depth	0.00	166.42	
Azimuth	311	314	
Dip	-50	-52	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH												
2.44	2.62	0.18		OBDH												
2.62	4.90	2.28	S	MSBS	extremely broken massive basalt	"grainy"										
4.90	5.39	0.49	S	MSBS	massive basalt with limonitic soil	"grainy"										
5.39	15.54	10.15	S	MSBS	broken massive basalt	"grainy"										
15.54	23.26	7.72	S	MSBS	epidote altered massive basalt	"grainy"										
23.26	23.74	0.48	T	MSCH	calcite veined red massive chert											
23.74	26.15	2.41	S	MSBS	calcite veined massive basalt	"grainy"										
26.15	26.63	0.48	T	GGBS	gouged basalt											
26.63	29.82	3.19	T	MSBS	massive basalt	"grainy"										
29.82	55.47	25.65	F	MSBS	massive basalt	"grainy"										
55.47	57.61	2.14	F	MSBS	massive basalt	"grainy"										
57.61	67.90	10.29	F	BRBS	breccia basalt	"aphanitic"										
67.90	68.06	0.16	F	PYMS	massive sulphides											
					-50-60% massive basalt		67.90	68.06	0.16	N113455	100	0.65%	129	160	1.6	
68.06	72.04	3.98	F	PHBS	porphyritic basalt	"aphanitic"										
72.04	90.18	18.14	F	BRBS	breccia basalt	"aphanitic"										
					-weakly magnetic		88.70	90.18	1.48	N113456	101	79	27	126	<0.2	
90.18	90.61	0.43	F	PYMS	massive sulphides											
					-interbedded with hematitic mudstone		90.18	90.61	0.43	N113457	105	2.13%	367	6880	9.0	
90.61	91.83	1.22	F	PHBS	porphyritic basalt	"aphanitic"										
					-magnetic		90.61	91.83	1.22	N113458	100	472	27	98	<0.2	
91.83	116.75	24.92	F	BRBS	breccia basalt	"aphanitic"										
116.75	127.78	11.03	F	BRBS	breccia basalt	"aphanitic"										
127.78	133.33	5.55	F	BRBS	altered breccia basalt	"aphanitic"										
							132.03	133.33	1.30	N113459	100	394	46	154	<0.2	
133.33	141.40	8.07	F	SSSG	stringer sulphides											
					-basalt fragments		133.33	134.76	1.43	N113460	94	1825	72	564	0.6	
					-specular hematite-quartz±pyrite matrix		134.76	135.94	1.18	N113461	102	0.37%	114	606	1.0	
					-quartz-pyrite stringers		135.94	137.46	1.52	N113462	101	0.51%	114	114	0.6	
					-quartz-pyrite-chalcopyrite stringers		137.46	138.99	1.53	N113463	98	0.97%	127	46	1.0	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: ID97-34 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						138.99	140.51	1.52	N113464	89	0.13%	110	78	<0.2	
						140.51	141.40	0.89	N113465	100	0.25%	154	88	<0.2	
141.40	150.78	9.38	F	SSSG	stringer sulphides										
					-basalt fragments	141.40	142.18	0.78	N113466	100	0.65%	146	28	0.6	
					-specular hematite-magnetite-quartz-pyrite matrix	142.18	143.26	1.08	N113467	100	388	98	760	<0.2	
					-quartz-pyrite-magnetite stringers	143.26	144.58	1.32	N113468	102	254	77	50	<0.2	
					-quartz-pyrite-chalcopyrite stringers	144.58	151.49	6.91	N113469	99	726	89	30	0.4	
						145.39	146.61	1.22	N113470	107	130	97	88	<0.2	
						146.61	147.68	1.07	N113471	98	146	90	204	<0.2	
						147.68	149.05	1.37	N113472	102	793	107	48	<0.2	
						149.05	149.96	0.91	N113473	88	188	100	944	<0.2	
						149.96	150.78	0.82	N113474	98	1215	89	822	0.2	
150.78	153.30	2.52	F	SGBS	very weak stringer sulphides										
					-basalt fragments (90%)	150.78	151.49	0.71	N113475	90	246	35	218	<0.2	
					-chlorite matrix (5-7%)	151.49	152.50	1.01	N113476	100	345	46	1505	0.2	
					-pyrite±quartz±red hematite stringers (2-3%)	152.50	153.30	0.80	N113477	106	143	37	2210	0.2	
153.30	168.55	15.25	F	BRBS	breccia basalt "aphanitic"										
						153.30	154.23	0.93	N113478	100	92	28	118	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-35 | Property: ICE | Section: 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,839.38	6,862,491.56	1,244.35	89.00	Drilling Dates:	Aug 20-22, 1997

Depth	0.00	87.78	
Azimuth	306	307	
Dip	-50	-50	
Method	Survey	Tropari	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH											
2.44	9.04	6.60	S	MSBS	weathered massive basalt "grainy"										
					-strong limonite and hematite staining	2.44	3.66	1.22	N113482	48	79	26	76	<0.2	
						3.66	4.88	1.22	N113483	94	64	25	74	<0.2	
						4.88	6.40	1.52	N113484	97	85	30	86	<0.2	
						6.40	7.92	1.52	N113485	89	71	21	56	<0.2	
						7.92	9.04	1.12	N113486	88	74	31	88	<0.2	
9.04	25.00	15.96	F	MSBS	massive basalt "grainy"										
25.00	89.00	64.00	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: ID97-36 | Property: ICE | Section: 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,882.79	6,862,709.20	1,284.01	175.41	Drilling Dates:	Sept 5-9, 1997

Depth	0.00
Azimuth	306
Dip	-54
Method	Survey

From (m)	To (m)	Interval (m)	*	Unit	Comments
0.00	1.22	1.22		CSDH	casing
1.22	1.60	0.38	F	OBDH	overburden
1.60	16.20	14.60	F	MSBS	weathered massive basalt "grainy"
16.20	26.95	10.75	T	MSBS	massive basalt "grainy"
26.95	29.11	2.16	F	MSBS	veined massive basalt "grainy"
29.11	40.00	10.89	F	MSBS	massive basalt "grainy"
40.00	41.00	1.00	F	MSCH	massive red chert
					-strongly calcareous
41.00	68.60	27.60	F	MSBS	massive basalt "grainy"
68.60	71.00	2.40	F	MSBS	fractured and veined massive basalt "grainy"
71.00	79.55	8.55	F	MSBS	massive basalt "grainy"
					-minor disseminated pyrite
79.55	80.40	0.85	F	HECH	hematitic chert
80.40	81.22	0.82	F	PYMS	massive sulphides
					-chalcopyrite rich
81.22	83.40	2.18	F	PYMS	massive sulphides
					-bornite and chalcopyrite rich
83.40	99.30	15.90	F	PYMS	massive sulphides
					-dominated by pyrite with lesser chalcopyrite
					-approximately 20% quartz gangue, generally increasing downhole

From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
32.45	36.33	3.88	N113885	85	440	9	56	0.6	
36.33	36.73	0.40	N113886	100	86	13	60	<0.2	
40.00	41.00	1.00	N113887	94	17	8	24	<0.2	
76.66	78.33	1.67	N113888	95	87	33	104	<0.2	
78.33	79.55	1.22	N113889	71	91	40	218	<0.2	
79.55	80.40	0.85	N113890	88	0.33%	73	1535	0.4	
80.40	81.22	0.82	N113891	83	7.24%	1650	238	11.4	420
81.22	82.32	1.10	N113892	100	8.32%	1305	688	26.8	940
82.32	83.40	1.08	N113893	100	9.92%	689	502	27.0	715
83.40	84.43	1.03	N113894	94	4.43%	611	784	22.4	795
84.43	85.95	1.52	N113895	90	3.73%	525	1640	24.2	910
85.95	87.48	1.53	N113896	100	3.93%	818	2810	15.4	735
87.48	89.00	1.52	N113897	93	2.68%	352	1410	13.2	755
89.00	90.53	1.53	N113898	99	4.05%	467	1710	10.0	650
90.53	91.59	1.06	N113899	100	3.54%	606	3020	7.2	430
91.59	93.12	1.53	N113900	100	4.23%	574	3930	13.2	675
93.12	94.64	1.52	N114054	97	3.44%	319	1715	8.6	570

*S-strong weathering, T-transitional weathering, F-fresh

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						94.64	96.16	1.52	N114055	100	3.01%	413	1770	6.6	700
						96.16	97.84	1.68	N114056	93	4.12%	591	1010	17.2	795
						97.84	99.30	1.46	N114057	100	3.84%	544	1305	17.2	740
99.30	107.00	7.70	F	PHBS	porphyritic basalt "aphanitic"										
					-porphyritic breccia basalt with approximately 10%	99.30	100.89	1.59	N114058	100	197	21	208	<0.2	
					dark green chloritric matrix	100.89	102.41	1.52	N114059	92	142	25	156	<0.2	
						102.41	104.09	1.68	N114060	85	135	31	126	<0.2	
						104.09	105.46	1.37	N114061	71	87	23	90	<0.2	
						105.46	107.00	1.54	N114062	69	81	23	98	<0.2	
107.00	112.15	5.15	F	HESG	hematite rich stringer sulpides										
					-basalt fragments (10%)	107.00	108.51	1.51	N114063	96	1.41%	472	3370	4.8	
					-specular hematite matrix (60-70%)	108.51	110.33	1.82	N114064	100	0.88%	434	1995	3.4	
					-quartz-pyrite-red hematite stringers	110.33	112.15	1.82	N114065	90	0.76%	208	1145	2.6	
					-quartz-pyrite-chalcopyrite stringers										
112.15	117.65	5.50	F	HESG	hematite rich stringer sulphides										
					-minor basalt fragments (<5%)	112.15	113.08	0.93	N114066	100	0.36%	180	1805	2.0	
					-specular hematite matrix (>80%)	113.08	114.60	1.52	N114067	100	63	148	72	<0.2	
					-quartz-pyrite stringers	114.60	116.13	1.53	N114068	95	1505	184	132	1.0	
						116.13	117.65	1.52	N114069	100	84	93	642	0.6	
117.65	135.95	18.30	F	HESG	hematite rich stringer sulphides										
					-basalt fragments (10-20%)	117.65	119.18	1.53	N114070	93	60	118	1125	0.6	
					-specular hematite matrix (higher in quartz than	119.18	120.70	1.52	N114071	95	134	78	60	<0.2	
					overlaying specular hematite matrix)	120.70	122.22	1.52	N114072	92	197	78	496	<0.2	
					-minor quartz-pyrite stringers	122.22	124.21	1.99	N114073	93	215	101	990	<0.2	
						124.21	125.57	1.36	N114074	93	104	70	322	<0.2	
						125.57	127.10	1.53	N114075	100	125	61	206	<0.2	
						127.10	128.63	1.53	N114076	93	148	79	190	<0.2	
						128.63	130.15	1.52	N114077	100	127	67	130	<0.2	
						130.15	131.67	1.52	N114078	91	69	67	64	<0.2	
						131.67	133.20	1.53	N114079	100	159	104	144	0.6	
						133.20	134.72	1.52	N114080	96	138	58	32	<0.2	
						134.72	135.95	1.23	N114081	100	3960	63	30	<0.2	
135.95	142.34	6.39	F	SSSG	stringer sulphides										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-36 Property ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-40% basalt fragments		135.95	137.77	1.82	N114082	92	114	45	348	<0.2	
					-10-20% specular hematite matrix		137.77	139.29	1.52	N114083	97	114	193	532	1.0	
					-quartz-pyrite stringers		139.29	140.82	1.53	N114084	97	146	113	1320	4.4	
					-quartz-pyrite-chalcopyrite stringers		140.82	142.34	1.52	N114085	95	89	185	1670	4.2	
142.34	147.57	5.23	F	SSSG	stringer sulphides											
					-50-60% basalt fragments		142.34	143.87	1.53	N114086	93	146	189	488	3.4	
					-quartz-chlorite-pyrite matrix		143.87	145.39	1.52	N114087	85	669	139	298	0.8	
					-quartz-pyrite±chalcopyrite±red hematite stringers		145.39	146.91	1.52	N114088	88	235	116	1430	0.8	
							146.91	147.57	0.66	N114089	100	886	147	1015	0.6	
147.57	169.90	22.33	F	MSBS	massive basalt	"grainy"										
					-locally chlorite-epidote altered		147.57	148.44	0.87	N114090	97	100	32	100	<0.2	
					-fine grained		148.44	149.96	1.52	N114091	100	71	31	112	<0.2	
					-weakly magnetic											
169.90	173.41	3.51	F	MSBS	veined massive basalt	"grainy"										
173.41	175.41	2.00	F	MSBS	massive basalt	"grainy"										
					-broken with gouge at 173.35-174.15m											
					EOH											

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-35 | Property: ICE | Section: 11,100 N | Depth: 0.00 | Azimuth:

Easting:	Northing:	Elevation:	Depth:	Logger:	Dip:	-90
376,650.23	6,862,633.05	1,281.37	45.72	Drilling Dates: July 20-22, 1997	Method:	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.66	3.66		CSDH	casing										
3.66	9.76	6.10	T	OBDH	overburden										
						3.66	5.79	2.13	N113196	20	261	24	118	<0.2	
						5.79	7.92	2.13	N113197	27	764	27	166	0.2	
						7.92	8.38	0.46	N113198	39	0.65%	23	208	0.4	
						8.38	9.76	1.38	N113199	40	0.15%	23	176	0.2	
9.76	14.63	4.87	S	XXLI	limonitic soil "aphanitic"										
					-strong limonite staining	9.76	10.97	1.21	N113200	39	0.17%	21	210	1.0	
					-trace malachite on fractures	10.97	12.50	1.53	N113201	75	0.24%	17	190	0.8	
						12.50	13.41	0.91	N113202	91	0.50%	36	240	1.2	
						13.41	14.63	1.22	N113203	61	0.70%	26	370	2.2	
14.63	16.46	1.83	T	PYSG	pyrite with basalt fragments										
					-weak limonite staining	14.63	15.96	1.33	N113204	56	0.86%	277	314	<0.2	
					-pyrite increases down section	15.96	16.46	0.50	N113205	88	1.15%	267	302	0.2	
16.46	18.90	2.44	T	HEPY	hematitic pyrite										
					-weak chalcocite	16.46	17.37	0.91	N113206	64	0.72%	275	345	1.0	25
					-trace cuprite and black wad on fractures										
					-chalcocite coating pyrite	17.37	18.90	1.53	N113207	100	0.69%	780	265	1.0	30
18.90	23.70	4.80	T	SGBS	weak stinger basalt "aphanitic"										
					-basalt fragments	18.90	20.07	1.17	N113208	100	0.51%	165	245	<0.2	20
					-chlorite-specular hematite ± pyrite matrix	20.07	21.03	0.96	N113209	100	1.07%	80	200	1.0	15
					-quartz-red hematite ± pyrite stringers	21.03	22.56	1.53	N113210	100	1.34%	120	235	<0.2	<5
					-weak chalcocite along fractures	22.56	23.70	1.14	N113211	96	1.86%	150	220	<0.2	5
23.70	24.57	0.87	T	HEPY	hematitic pyrite										
					-patches of chalcopyrite associated with pyrite	23.70	24.57	0.87	N113212	70	3.17%	900	275	<0.2	50
					-weak chalcocite along fractures										
24.57	26.00	1.43	F	GGBS	gouged basalt "aphanitic"										
						24.57	26.00	1.43	N113213	84	1.83%	80	375	<0.2	5
26.00	26.70	0.70	T	BRBS	altered breccia basalt "aphanitic"										
					-weak chalcocite along fractures	26.00	26.70	0.70	N113214	69	1.13%	45	600	<0.2	10

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-35 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
26.70	29.40	2.70	F	GGBS	gouged breccia basalt										
						26.70	27.58	0.88	N113215	63	1.46%	30	360	0.4	
						27.58	29.40	1.82	N113216	27	0.57%	35	552	0.2	
29.40	43.40	14.00	F	BRBS	heavily fractured breccia basalt "aphanitic"										
						29.40	30.61	1.21	N113217	100	229	39	512	0.2	
						30.61	31.70	1.09	N113218	100	2190	63	1740	0.2	
43.40	45.72	2.32	F	FLBS	faulted massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-36 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:
376,630.30	6,862,647.70	1,286.43	41.76

Logger: Sefika Lesnikoff
Drilling Dates: July 22-24, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	5.20	3.37	T	OBDH	overburden										
						1.83	5.20	3.37	N113220	20	487	25	186	<0.2	
5.20	6.77	1.57	S	BRBS	extremely weathered breccia basalt "aphanitic"										
					-strong limonite	5.20	6.25	1.05	N113221	100	0.24%	36	436	<0.2	
					-moderate hematite	6.25	6.77	0.52	N113222	100	0.44%	48	996	<0.2	
6.77	9.04	2.27	S	BRBS	weathered breccia basalt "aphanitic"										
					-strong hematite and minor limonite staining	6.77	7.62	0.85	N113223	100	0.25%	35	340	<0.2	
					-contains pyrite bands and disseminated pyrite	7.62	9.04	1.42	N113224	99	0.47%	76	1335	<0.2	
					-minor cuprite on fractures										
					-trace malachite										
9.04	11.58	2.54	S	GGBS	gouged breccia basalt "aphanitic"										
						9.04	10.76	1.72	N113225	73	0.42%	76	1390	<0.2	
						10.76	11.58	0.82	N113226	84	0.51%	82	2120	<0.2	
11.58	15.09	3.51	S	BRBS	weathered breccia basalt "aphanitic"										
					-strong limonite and hematite staining	11.58	12.80	1.22	N113227	83	0.15%	35	456	<0.2	
						12.80	14.33	1.53	N113228	94	0.27%	42	750	<0.2	
						14.33	15.09	0.76	N113229	100	0.27%	45	808	<0.2	
15.09	15.85	0.76	S	BRBS	very broken breccia basalt "aphanitic"										
						15.09	15.85	0.76	N113230	99	0.23%	31	376	<0.2	
15.85	17.07	1.22	S	HEPY	extremely weathered hematitic pyrite										
					-strong limonite on fractures	15.85	17.07	1.22	N113231	100	0.45%	168	410	<0.2	
					-fractures contain minor cuprite										
17.07	18.17	1.10	S	BRBS	breccia basalt "aphanitic"										
						17.07	18.17	1.10	N113232	100	0.12%	23	220	<0.2	
18.17	19.51	1.34	S	HEPY	strongly weathered and broken hematitic pyrite										
					-strong limonite	18.17	19.51	1.34	N113233	37	0.63%	292	166	0.2	
					-weak chalcocite on fractures										
19.51	22.55	3.04	T	HEPY	hematitic pyrite										
					-trace cuprite along the fractures	19.51	21.04	1.53	N113234	84	2.38%	316	94	<0.2	
					-weak chalcocite coating pyrite	21.04	22.55	1.51	N113235	94	3.01%	144	190	0.8	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-36 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
22.55	23.34	0.79	F	BRBS	broken breccia basalt "aphanitic"										
						22.55	23.34	0.74	N113236	100	2.70%	111	140	<0.2	
23.34	23.84	0.50	F	HEPY	hematitic pyrite										
					-trace chalcocite on fractures	23.34	23.84	0.50	N113237	100	3.20%	379	124	0.6	50
23.84	24.84	1.00	F	BRBS	breccia basalt "aphanitic"										
					-fractures infilled with fine grained pyrite	23.84	24.84	1.00	N113238	95	1.75%	44	396	<0.2	
24.84	25.32	0.48	F	HEPY	hematitic pyrite										
					-trace chalcopyrite	24.84	25.32	0.48	N113239	100	2.23%	309	216	0.6	20
					-weak chalcocite, cuprite and native copper										
25.32	41.76	16.44	F	BRBS	heavily fractured breccia basalt "aphanitic"										
						25.32	26.52	1.20	N113240	86	2.51%	73	1810	<0.2	
						26.52	28.04	1.52	N113241	99	0.28%	103	3480	<0.2	
						28.04	29.26	1.22	N113242	91	489	38	498	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC97-37	Property:	ICE	Section:	11,100 N	Depth	0.00
						Azimuth	
Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff	Dip	-90
376,590.02	6,862,677.52	1,299.63	39.93	Drilling Dates:	July 24-25, 1997	Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	6.40	4.57	T	OBDH	overburden										
						1.83	6.40	4.57	N113262	25	0.23%	32	768	<0.2	
6.40	10.36	3.96	S	BRBS	broken breccia basalt "aphanitic"										
						6.40	7.62	1.22	N113243	66	0.31%	27	784	<0.2	
						7.62	8.84	1.22	N113244	22	0.27%	29	672	<0.2	
						8.84	10.36	1.52	N113245	11	0.36%	24	712	<0.2	
10.36	12.19	1.83	S	SGBS	stringer basalt "aphanitic"										
					-strong limonite and hematite	10.36	11.30	0.94	N113246	56	0.45%	25	762	0.4	
					-basalt fragments	11.30	12.19	0.89	N113247	78	0.40%	21	1280	0.8	
					-quartz-pyrite-red hematite stringers										
12.19	13.41	1.22	T	MSCH	red massive chert										
						12.19	13.41	1.22	N113248	24	0.08%	5	196	<0.2	
13.41	15.50	2.09	S	SGBS	very weathered stringer basalt "aphanitic"										
					-basalt fragments	13.41	14.74	1.33	N113249	59	0.43%	25	696	<0.2	
					-quartz-pyrite-red hematite stringers	14.74	15.50	0.76	N113250	100	0.46%	92	308	<0.2	
15.50	22.56	7.06	S	SGBS	stringer basalt										
					-basalt fragments	15.50	16.46	0.96	N113251	100	0.32%	125	352	<0.2	
					-quartz-pyrite-red hematite stringers	16.46	17.98	1.52	N113252	100	0.38%	247	268	<0.2	
					-trace chalcocite along fractures	17.98	19.51	1.53	N113253	96	0.42%	262	292	<0.2	
						19.51	20.27	0.76	N113254	100	0.37%	265	348	<0.2	
						20.27	22.56	2.29	N113255	58	0.48%	234	440	<0.2	
22.56	28.65	6.09	T	BRBS	very broken breccia basalt "aphanitic"										
					-moderate limonite	22.56	24.69	2.13	N113256	14	0.26%	32	712	<0.2	
					-from 24.69 to 25.40m moderate malachite along fracture	24.69	25.60	0.91	N113257	42	0.78%	40	732	<0.2	
						25.60	28.65	3.05	N113258	20	0.54%	189	3910	<0.2	
28.65	32.82	4.17	F	BRBS	broken breccia basalt "aphanitic"										
						28.65	30.18	1.53	N113259	15	298	38	162	<0.2	
						30.18	31.70	1.52	N113260	34	188	34	168	<0.2	
						31.70	32.82	1.12	N113261	30	87	41	150	<0.2	
32.82	35.78	2.96	T	BRBS	breccia basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-37 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
35.78	36.68	0.90	T	CAVN	calcite vein										
36.68	39.93	3.25	F	MSBS	massive basalt "grainy"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-38 | Property: ICE | Section: 11,100 N | Depth 0.00 | Azimuth

Easting:	Northing:	Elevation:	Depth:	Logger:	Dip	-90
376,611.38	6,862,661.76	1,290.94	34.75	Drilling Dates: July 26-27, 1997	Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	6.71	4.88	T	BRBS	broken breccia basalt "aphanitic"										
						1.83	6.71	4.88	N113263	22	609	28	396	<0.2	
6.71	10.36	3.65	S	XXLI	strongly limonitic rock with ferricrete										
					-no primary rock visible	6.71	10.36	3.65	N113264	21	816	10	128	1.2	
10.36	11.46	1.10	T	PYSG	very pyritic stringers										
					-minor limonite	10.36	11.46	1.10	N113265	83	0.64%	750	50	<0.2	35
					-basalt and chert fragments										
					-quartz-pyrite-red hematite stringers										
11.46	15.83	4.37	T	HEPY	very altered hematitic pyrite "aphanitic"										
					-weak chalcocite and cuprite	11.46	14.63	3.17	N113266	38	0.95%	720	90	<0.2	40
					-rare chalcocite coating pyrite	14.63	15.83	1.20	N113267	100	0.54%	580	35	<0.2	20
					-from 11.46 to 13.75m cave, no core										
15.83	18.18	2.35	T	SGBS	stringer basalt with chert										
					-basalt and chert fragments	15.83	17.23	1.40	N113268	100	2.22%	405	100	<0.2	20
					-quartz-pyrite stringers	17.23	18.18	0.95	N113269	100	2.14%	265	85	<0.2	15
18.18	19.94	1.76	T	SGBS	broken weak stringer basalt										
					-basalt fragments	18.18	18.88	0.70	N113270	100	1.38%	130	145	<0.2	10
					-quartz-pyrite ± red hematite stringers	18.88	19.94	1.06	N113271	83	1.30%	140	130	<0.2	30
19.94	21.03	1.09	T	BSPY	pyrite with basalt fragments "aphanitic"										
					-weak chalcocite infilling fractures	19.94	21.03	1.09	N113272	86	1.05%	310	155	<0.2	30
21.03	24.23	3.20	T	HEPY	hematitic pyrite										
					-moderate chalcocite	21.03	22.56	1.53	N113273	97	0.19%	405	65	<0.2	10
						22.56	24.23	1.67	N113274	100	0.34%	570	65	<0.2	20
24.23	25.90	1.67	T	BSPY	pyrite with basalt fragments "aphanitic"										
					-weak chalcocite	24.23	25.90	1.67	N113275	100	0.52%	350	155	<0.2	25
25.90	27.13	1.23	F	BRBS	weakly gouged breccia basalt "aphanitic"										
						25.90	27.13	1.23	N113276	93	1.65%	138	3590	0.4	
27.13	34.75	7.62	F	BRBS	fractured breccia basalt "aphanitic"										
						27.13	28.65	1.52	N113277	89	1130	118	1525	<0.2	
					EOH	28.65	29.57	0.92	N113278	100	265	44	176	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-39 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,669.82	6,862,618.52	1,274.58	31.70	Drilling Dates:	July 27-28, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	3.05	1.22	T	OBDH	overburden										
						1.83	3.05	1.22	N113279	3	0.01%	28	118	<0.2	
3.05	6.86	3.81	S	XXLI	ferricrete breccia										
						3.05	3.81	0.76	N113280	96	0.29%	11	144	2.2	
						3.81	5.33	1.52	N113281	43	0.30%	9	198	2.6	
						5.33	6.89	1.56	N113282	46	0.41%	10	298	1.2	
6.86	7.72	0.86	S	BRBS	broken breccia basalt "aphanitic"										
					-strong limonite and hematite	6.89	7.72	0.83	N113283	71	0.35%	27	246	0.6	
					-minor chalcocite and black wad										
7.72	11.11	3.39	T	GGBS	gouged basalt										
					-moderate cuprite	7.72	9.75	2.03	N113284	66	1.89%	78	862	2.2	
						9.75	11.11	1.36	N113285	41	2.32%	79	734	1.6	
11.11	13.41	2.30	S	GGBS	strongly limonitic gouged basalt										
					-moderate cuprite	11.11	11.89	0.78	N113286	100	1.49%	30	656	0.8	
						11.89	13.41	1.52	N113287	38	1.42%	40	1035	<0.2	
13.41	21.67	8.26	T	GGBS	chloritized gouged basalt										
					-from 21.10 to 21.20m cuprite occurs	13.41	14.63	1.22	N113288	75	0.88%	130	3600	<0.2	
						14.63	17.07	2.44	N113289	40	0.42%	202	3890	<0.2	
						17.07	18.55	1.48	N113290	88	0.06%	202	2840	<0.2	
						18.55	21.67	3.12	N113291	40	0.75%	216	3160	<0.2	
21.67	31.70	10.03	F	BRBS	breccia basalt "aphanitic"										
						21.67	22.80	1.13	N113292	81	857	41	326	<0.2	
						22.80	23.47	0.67	N113293	99	353	57	838	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-40 | Property: ICE | Section: 11,100 N

Easting:	Northing:	Elevation:	Depth:
376,689.94	6,862,603.11	1,277.77	35.36

Logger: Sefika Lesnikoff
Drilling Dates: July 28-29, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	1.34	0.12	T	OBDH	overburden										
						1.22	1.34	0.12	N113303	100	471	28	102	<0.2	
1.34	3.51	2.17	S	BRBS	very broken breccia basalt "aphanitic"										
					-strong limonite	1.34	2.13	0.79	N113304	100	415	26	132	<0.2	
						2.13	3.51	1.38	N113305	83	823	23	100	<0.2	
3.51	14.17	10.66	S	BRBS	broken breccia basalt "aphanitic"										
					-strong limonite	3.51	4.27	0.76	N113306	100	480	25	92	<0.2	
					-moderate hematite	4.27	8.84	4.57	N113307	20	635	24	80	<0.2	
						8.84	10.36	1.52	N113308	100	887	29	100	<0.2	
						10.36	11.28	0.92	N113309	100	0.39%	43	152	<0.2	
						11.28	12.65	1.37	N113310	83	0.26%	26	72	<0.2	
						12.65	13.41	0.76	N113311	100	0.16%	25	74	<0.2	
						13.41	14.17	0.76	N113312	89	0.35%	31	94	<0.2	
14.17	21.56	7.39	S	BRBS	broken breccia basalt with cuprite "aphanitic"										
					-strong limonite	14.17	15.85	1.68	N113313	62	0.49%	30	120	<0.2	<5
					-moderate cuprite	15.85	17.07	1.22	N113314	78	3.40%	35	205	<0.2	<5
					-black wad at 21.10 to 21.15m	17.07	18.59	1.52	N113315	97	1.55%	40	200	<0.2	<5
					-minor native copper	18.59	19.81	1.22	N113316	100	1.80%	30	195	<0.2	<5
						19.81	20.80	0.99	N113317	66	2.09%	45	205	<0.2	<5
						20.80	21.56	0.76	N113318	100	3.64%	45	265	<0.2	<5
21.56	22.56	1.00	T	BRBS	altered breccia basalt "aphanitic"										
					-first 8 cm moderate native copper	21.56	22.56	1.00	N113319	77	2.05%	50	615	<0.2	<5
					-rest is minor native copper and cuprite										
22.56	35.36	12.80	F	BRBS	fractured breccia basalt "aphanitic"										
					-first 50 cm disseminated native copper	22.56	24.08	1.52	N113320	88	628	45	506	<0.2	
					-at 24.70m patchy pyrite associated with chalcopyrite	24.08	24.80	0.72	N113321	100	360	40	214	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-41 | **Property:** ICE | **Section:** 11,100 N

Easting:	Northing:	Elevation:	Depth:
376,731.42	6,862,592.65	1,275.38	35.97

Logger: Sefika Lesnikoff
Drilling Dates: July 29, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	1.42	0.20	T	OBDH	overburden										
						1.22	1.42	0.20	N113322	100	495	27	176	<0.2	
1.42	5.75	4.33	T	BRBS	breccia basalt "aphanitic"										
					-trace malachite and black wad	1.42	2.44	1.02	N113323	75	683	32	202	<0.2	
						2.44	3.66	1.22	N113324	94	493	32	136	<0.2	
						3.66	4.57	0.91	N113325	100	475	32	128	<0.2	
						4.57	5.75	1.18	N113337	97	228	34	108	<0.2	
5.75	10.82	5.07	S	BRBS	broken breccia basalt "aphanitic"										
					-strong limonite and hematite	5.75	6.71	0.96	N113326	100	0.18%	40	355	<0.2	<5
					-weak malachite	6.71	8.38	1.67	N113327	76	0.30%	55	475	<0.2	<5
					-trace black wad associated with malachite	8.38	9.60	1.22	N113328	90	0.12%	50	360	<0.2	<5
						9.60	10.82	1.22	N113329	77	0.28%	70	840	<0.2	<5
10.82	14.38	3.56	S	BRBS	breccia basalt "aphanitic"										
					-minor malachite and cuprite	10.82	12.34	1.52	N113330	100	0.23%	55	540	<0.2	<5
					-malachite increases at end of the interval	12.34	13.41	1.07	N113331	84	0.54%	50	400	<0.2	<5
						13.41	14.38	0.97	N113332	88	0.38%	45	275	<0.2	<5
14.38	16.07	1.69	S	FLBS	faulted basalt with malachite "aphanitic"										
					-moderate malachite, azurite and black wad	14.38	14.94	0.56	N113333	98	0.99%	20	290	<0.2	<5
					-weak cuprite	14.94	16.07	1.13	N113334	86	6.54%	80	1655	<0.2	<5
16.07	35.97	19.90	F	BRBS	breccia basalt "aphanitic"										
					-trace cuprite	16.07	17.12	1.05	N113335	100	575	44	668	<0.2	
						17.12	17.98	0.86	N113336	98	92	39	206	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC97-42 | Property: ICE | Section: 11,100 N

Easting:	Northing:	Elevation:	Depth:
376,731.58	6,862,573.61	1,266.70	15.24

Logger: Sefika Lesnikoff

Drilling Dates: July 30, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments
0.00	1.83	1.83		CSDH	casing
1.83	2.16	0.33	T	OBDH	overburden
2.16	4.27	2.11	S	BRBS	broken breccia basalt "aphanitic"
					-strong limonite and hematite
4.27	15.24	10.97	F	BRBS	breccia basalt "aphanitic"
					EOH

From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
1.83	2.16	0.33	113338	55	367	28	222	<0.2	
2.16	3.10	0.94	113339	100	361	32	140	<0.2	
3.10	4.27	1.17	113340	91	773	35	170	<0.2	
4.27	5.49	1.22	113341	100	123	26	76	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC97-43	Property:	ICE	Section:	11,100 N	Depth	0.00
						Azimuth	
Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff	Dip	-90
376,470.92	6,862,520.78	1,264.76	37.80	Drilling Dates:	July 31-Aug 1, 1997	Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	4.37	1.93	T	OBDH	overburden										
						2.44	4.37	1.93	N113342	12	70	16	84	<0.2	
4.37	27.40	23.03	T	RBCH	grey ribbon chert										
					-moderate limonite	4.37	5.49	1.12	N113343	75	85	12	104	0.2	
					-with carbonaceous mudstone	5.49	6.30	0.81	N113344	100	68	12	128	0.2	
					-moderate sandstone and siltstone	6.30	7.32	1.02	N113345	100	85	10	92	<0.2	
						7.32	8.53	1.21	N113346	52	62	10	100	<0.2	
						8.53	10.06	1.53	N113347	86	84	13	126	0.2	
						10.06	11.28	1.22	N113348	63	70	9	90	<0.2	
						11.28	12.50	1.22	N113349	65	61	6	64	<0.2	
						12.50	13.11	0.61	N113350	82	69	6	64	<0.2	
						13.11	14.48	1.37	N113351	66	59	6	72	<0.2	
						14.48	15.09	0.61	N113352	72	57	8	74	<0.2	
						15.09	16.46	1.37	N113353	51	85	11	152	0.2	
						16.46	17.98	1.52	N113354	80	68	6	80	0.2	
						17.98	19.51	1.53	N113355	63	65	5	60	0.2	
						19.51	21.03	1.52	N113356	52	80	17	114	<0.2	
						21.03	22.56	1.53	N113357	76	63	13	112	<0.2	
						22.56	23.47	0.91	N113358	99	66	13	140	<0.2	
						23.47	24.54	1.07	N113359	75	92	5	70	<0.2	
						24.54	25.91	1.37	N113360	15	56	3	30	<0.2	
						25.91	27.40	1.49	N113361	40	61	4	40	<0.2	
27.40	29.72	2.32	T	GGMS	gouged mudstone										
						27.40	28.65	1.25	N113362	74	76	11	94	<0.2	
						28.65	29.72	1.07	N113363	57	66	4	80	0.2	
29.72	37.80	8.08	T	RBCH	grey ribbon chert										
					-with carbonaceous mudstone	29.72	30.48	0.76	N113364	100	71	4	80	<0.2	
						30.48	32.00	1.52	N113365	26	68	5	78	0.2	
						32.00	32.92	0.92	N113366	43	70	6	74	<0.2	
						32.92	33.82	0.90	N113367	76	44	3	36	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-43 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						33.82	35.05	1.23	N113368	40	57	3	48	0.2	
						35.05	36.58	1.53	N113369	60	66	5	46	<0.2	
						36.58	37.80	1.22	N113370	74	72	6	60	0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-44 | Property: ICE | Section: 10,550N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
375,921	6,862,509	1,267	164.13	Drilling Dates:	August 09-12, 1997

Depth	0.00
Azimuth	270
Dip	-50
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH											
3.05	7.58	4.53	T	MSBS	massive basalt "grainy"										
7.58	26.15	18.57	T	BRBS	breccia basalt "aphanitic"										
26.15	31.80	5.65	T	BRBS	epidote altered breccia basalt "aphanitic"										
31.80	37.03	5.23	T	BRBS	porphyritic breccia basalt "aphanitic"										
37.03	39.55	2.52	T	BRBS	fractured breccia basalt "aphanitic"										
39.55	47.60	8.05	T	BRBS	weakly porphyritic breccia basalt "aphanitic"										
47.60	67.30	19.70	T	BRBS	breccia basalt "aphanitic"										
					-hematitic matrix										
67.30	74.07	6.77	T	BRBS	breccia basalt "aphanitic"										
74.07	75.15	1.08	T	BRBS?	altered basalt "aphanitic?"										
75.15	83.10	7.95	S	MSCG	carbonaceous conglomerate mudstone										
83.10	84.28	1.18	T	BRBS?	altered basalt "aphanitic?"										
84.28	95.71	11.43	S	MSCG	carbonaceous conglomerate mudstone										
95.71	97.50	1.79	T	BRBS?	altered basalt "aphanitic"										
97.50	122.15	24.65	T	BRBS	breccia basalt "aphanitic"										
122.15	131.98	9.83	T	BRBS	porphyritic breccia basalt "aphanitic"										
131.98	132.68	0.70	T	CAVN	carbonate vein										
132.68	147.52	14.84	T	BRBS	porphyritic breccia basalt "aphanitic"										
147.52	164.13	16.61	T	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-45 **Property:** ICE **Section:** 10,550N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
375,921	6,862,509	1,267	110.95	Drilling Dates:	August 12-14, 1997

Depth	0.00	110.95	
Azimuth	305	305	
Dip	-50	-51	
Method	Brunton	Acid	

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	8.84	5.79	S	MSBS	massive basalt "grainy"										
8.84	29.40	20.56	T	BRBS	breccia basalt with spherulites "aphanitic"										
29.40	57.06	27.66	T	BRBS	breccia basalt "aphanitic"										
57.06	64.10	7.04	S	BRBS	breccia basalt "aphanitic"										
					-hematitic matrix										
64.10	77.25	13.15	T	BRBS	weakly porphyritic breccia basalt "aphanitic"										
77.25	77.95	0.70	T	BRBS	altered breccia basalt "aphanitic"										
77.95	82.35	4.40	T	MSCG	carbonaceous conglomerate mudstone										
82.35	83.10	0.75	T	BRBS?	altered breccia basalt "aphanitic?"										
83.10	86.30	3.20	F	MSCG	carbonaceous conglomerate mudstone										
86.30	91.10	4.80	F	RBCH	ribbon bedded chert										
91.10	92.50	1.40	T	RBCH	ribbon bedded chert										
					-interbedded with mudstone										
92.50	94.35	1.85	T	BRBS?	altered basalt "aphanitic?"										
					-interbedded with carbonaceous conglomerate mudstone										
94.35	103.17	8.82	F	BRBS	altered breccia basalt "aphanitic"										
103.17	110.95	7.78	F	BRBS	weakly porphyritic breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-46 | **Property:** ICE | **Section:** 11,150 N

Easting:	Northing:	Elevation:	Depth:
376,680.18	6,862,674.01	1,289.10	46.94

Logger: Sefika Lesnikoff
Drilling Dates: Aug 23-24, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	16.15	14.32	T	OBDH	overburden										
						14.33	15.24	0.91	N113487	33	597	75	312	0.4	
						15.24	16.15	0.91	N113488	22	487	15	312	0.8	
16.15	19.26	3.11	T	OBDH	basalt pebbles "aphanitic"										
					-minor limonite and hematite staining	16.15	17.98	1.83	N113489	8	1025	21	178	0.6	
						17.98	19.26	1.28	N113490	24	254	13	44	<0.2	
19.26	26.12	6.86	F	PYMS	massive sulphides										
					-dominated by pyrite	19.26	21.34	2.08	N113491	38	4.25%	285	1190	3.8	435
					-minor chalcopyrite	21.34	22.56	1.22	N113492	78	2.45%	522	712	4.0	305
					-strong chalcocite and black wad	22.56	23.47	0.91	N113493	77	4.51%	722	584	5.4	220
					-from 23.50-23.65m strong covellite	23.47	24.38	0.91	N113494	93	4.74%	718	618	5.2	170
						24.38	25.76	1.38	N113495	80	2.57%	526	368	2.6	90
						25.76	26.12	0.36	N113496	100	5.04%	340	1355	4.0	125
26.12	30.43	4.31	T	PHBS	altered porphyritic basalt "aphanitic"										
					-minor limonite	26.12	27.53	1.41	N113497	43	0.86%	98	238	0.6	15
						27.53	28.42	0.89	N113498	88	0.58%	29	166	<0.2	<5
						28.42	30.43	2.01	N113499	35	0.72%	44	144	0.2	<5
30.43	35.66	5.23	F	PYMS	massive sulphides										
					-dominated by pyrite	30.43	32.00	1.57	N113500	89	9.94%	510	1060	4.4	170
					-moderate chalcopyrite and chalcocite	32.00	33.53	1.53	N113501	86	9.17%	658	710	4.0	235
						33.53	34.75	1.22	N113502	51	10.9%	311	322	3.0	235
						34.75	35.66	0.91	N113503	77	6.25%	659	158	2.8	190
35.66	36.88	1.22	T	BRBS	altered breccia basalt "aphanitic"										
						35.66	36.88	1.22	N113504	57	0.48%	45	38	<0.2	10
36.88	42.37	5.49	T	BRBS	breccia basalt "aphanitic"										
					-minor limonite and cuprite	36.88	38.40	1.52	N113505	99	1.29%	33	542	0.8	15
					-weak black wad	38.40	39.93	1.53	N113506	92	1.49%	39	468	0.2	10
						39.93	41.30	1.37	N113507	99	0.97%	65	1585	<0.2	<5
						41.30	42.37	1.07	N113508	100	1.17%	82	2350	0.4	<5

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-46 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
42.37	44.35	1.98	T	FLBS	faulted breccia basalt "aphanitic"										
					-weak limonite and chalcocite	42.37	43.59	1.22	N113509	75	0.56%	71	3040	<0.2	10
					-minor cuprite	43.59	44.35	0.76	N113510	97	2.12%	99	1780	0.8	20
44.35	46.94	2.59	T	BRBS	fractured breccia basalt "aphanitic"										
					-weak limonite, cuprite, chalcocite and native copper	44.35	45.87	1.52	N113511	53	3470	108	2620	<0.2	
						45.87	46.94	1.07	N113512	84	3180	94	2900	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC97-47 | Property: ICE | Section: 11,050 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,620.73	6,862,593.73	1,274.56	33.83	Drilling Dates:	Aug 24-25, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	7.62	5.79	T	OBDH	overburden										
					-minor limonite staining	3.96	7.62	3.66	N113528	29	1590	26	186	<0.2	
7.62	10.66	3.04	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite and hematite	7.62	9.14	1.52	N113529	67	3590	46	190	<0.2	
						9.14	10.66	1.52	N113530	60	1340	31	136	<0.2	
10.66	11.32	0.66	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite and hematite	10.66	11.32	0.66	N113531	76	1.18%	25	138	<0.2	
					-weak cuprite and black wad										
11.32	15.09	3.77	T	BRBS	breccia basalt with cuprite "aphanitic"										
					-moderate limonite	11.32	12.75	1.43	N113532	87	2.51%	27	122	<0.2	
					-moderate to strong cuprite	12.75	13.81	1.06	N113533	77	2.89%	27	176	<0.2	
						13.81	15.09	1.28	N113534	52	1.95%	33	244	<0.2	
15.09	17.68	2.59	T	FLBS	faulted breccia basalt with cuprite "aphanitic"										
					-moderate limonite	15.09	17.07	1.98	N113535	23	1.93%	33	484	<0.2	
					-strong cuprite	17.07	17.68	0.61	N113536	98	2.77%	42	488	<0.2	
					-weak to moderate black wad										
17.68	26.82	9.14	T	PHBS	porphyritic basalt with cuprite "aphanitic"										
					-minor limonite	17.68	18.90	1.22	N113537	64	1.74%	33	276	<0.2	
					-strong cuprite	18.90	20.42	1.52	N113538	100	1.43%	58	1110	<0.2	
					-weak black wad	20.42	21.64	1.22	N113539	78	0.46%	72	1715	<0.2	
					-heavily fractured	21.64	23.16	1.52	N113540	82	0.51%	75	1865	<0.2	
						23.16	24.69	1.53	N113541	94	0.55%	78	2130	<0.2	
						24.69	26.21	1.52	N113542	70	0.27%	63	1350	<0.2	
						26.21	26.82	0.61	N113543	52	0.19%	58	1115	<0.2	
26.82	28.76	1.94	F	PHBS	porphyritic basalt "aphanitic"										
						26.82	27.74	0.92	N113544	86	316	61	974	<0.2	
						27.74	28.76	1.02	N113545	100	88	78	1440	<0.2	
28.76	33.83	5.07	F	BRBS	breccia basalt "aphanitic"										
						28.76	30.02	1.26	N113546	63	87	55	718	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC97-48		Property:	ICE	Section:	11,050 N	Depth	0.00
							Azimuth	
Easting:	Northing:	Elevation:	Depth:	Logger:		Sefika Lesnikoff	Dip	-90
376,600.71	6,862,608.19	1,278.90	32.31	Drilling Dates:		Aug 25-26, 1997	Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	3.66	1.22		OBDH	overburden										
3.66	9.84	6.18	S	BRBS	*stongly limonitized breccia basalt* "aphanitic"										
					-pervasive limonite	3.66	8.23	4.57	N113553	28	1030	13	86	0.2	
						8.23	9.84	1.61	N113554	84	882	19	96	<0.2	
9.84	12.34	2.50	S	PHBS	limonitized porphyritic basalt "aphanitic"										
					-trace malachite	9.84	10.97	1.13	N113555	95	1210	27	122	<0.2	
					-weak black wad	10.97	12.34	1.37	N113556	93	0.43%	27	116	<0.2	
12.34	16.96	4.62	S	PHBS	porphyritic basalt with malachite "aphanitic"										
					-strong malachite	12.34	14.02	1.68	N113557	87	1.01%	29	132	<0.2	
					-trace cuprite and black wad	14.02	15.07	1.05	N113558	100	0.83%	30	150	<0.2	
						15.07	16.96	1.89	N113559	49	1.25%	37	278	<0.2	
16.96	20.00	3.04	T	PHBS	porphyritic basalt with cuprite "aphanitic"										
					-minor cuprite	16.96	18.59	1.63	N113560	68	0.83%	54	848	<0.2	
					-trace black wad	18.59	20.00	1.41	N113561	100	0.37%	59	1255	<0.2	
20.00	31.70	11.70	T	BRBS	breccia basalt "aphanitic"										
					-weak cuprite and native copper	20.00	20.73	0.73	N113562	97	0.03%	50	652	<0.2	
						20.73	21.95	1.22	N113563	84	0.08%	64	912	<0.2	
						21.95	23.32	1.37	N113564	73	0.03%	50	728	<0.2	
						23.32	24.69	1.37	N113565	100	0.11%	56	932	<0.2	
						24.69	26.21	1.52	N113566	51	0.04%	50	556	<0.2	
						26.21	27.32	1.11	N113567	51	0.01%	60	506	0.2	
						27.32	28.04	0.72	N113568	100	0.07%	99	1505	<0.2	
						28.04	29.26	1.22	N113569	74	0.16%	123	3050	<0.2	
						29.26	30.78	1.52	N113570	87	0.07%	101	1790	<0.2	
						30.78	31.70	0.92	N113571	76	0.05%	67	754	<0.2	
31.70	32.31	0.61	F	BRBS	breccia basalt										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-49 | Property: ICE | Section: 11,150 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,660.22	6,862,688.17	1,287.16	29.26	Drilling Dates:	Aug 27-28, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	10.97	9.14		OBDH	overburden										
10.97	11.52	0.55	S	PHBS	strongly limonitized porphyritic basalt "aphanitic"										
					-minor hematite	10.97	11.52	0.55	N113609	95	0.18%	58	162	0.4	
11.52	13.18	1.66	S	PYMS	massive sulphides										
					-dominated by PY clasts	11.52	12.60	1.08	N113610	81	0.17%	387	84	0.2	
					-red hematite matrix	12.60	13.18	0.58	N113611	91	0.46%	364	222	0.4	
13.18	17.85	4.67	T	SSSG	limonitized stringer sulphides "porphyritic"										
					-porphyritic basalt fragments	13.18	14.33	1.15	N113612	77	2.19%	211	162	0.8	
					-chalcocite coating PY	14.33	15.54	1.21	N113613	97	2.77%	213	130	1.0	
					-weak cuprite	15.54	17.07	1.53	N113614	92	2.56%	93	204	0.6	
						17.07	17.85	0.78	N113615	79	1.28%	56	292	0.4	
17.85	20.27	2.42	T	GGBS	gouged basalt "porphyritic"										
					-weak black wad	17.85	18.75	0.90	N113616	89	1.96%	110	4650	0.2	
						18.75	20.27	1.52	N113617	100	0.75%	161	4780	<0.2	
20.27	26.21	5.94	F	PHBS	porphyritic breccia basalt "aphanitic"										
					-dispersed PY cubes	20.27	21.95	1.68	N113618	100	0.21%	81	2830	<0.2	
						21.95	22.86	0.91	N113619	100	0.10%	99	2470	<0.2	
						22.86	24.38	1.52	N113620	94	0.32%	99	1885	<0.2	
						24.38	25.30	0.92	N113621	80	0.49%	70	1430	<0.2	
						25.30	26.21	0.91	N113622	100	0.67%	98	2650	<0.2	
26.21	29.26	3.05	F	SGBS	weak stringer sulphides "aphanitic"										
					-basalt fragments	26.21	27.73	1.52	N113623	97	0.34%	68	1210	0.6	
					-PY-chlorite-Qz±red hematite stringers	27.73	29.26	1.53	N113624	90	0.42%	125	2500	1.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-50 | Property: ICE | Section: 11,050 N | Depth 0.00 | Azimuth

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff	Dip -90
376,580.46	6,862,623.34	1,284.48	34.14	Drilling Dates:	Aug 28-29, 1997	Method Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	6.71	6.71		CSDH	casing										
6.71	7.00	0.29	T	OBDH	overburden										
7.00	8.38	1.38	S	BRBS	limonitized breccia basalt "aphanitic"										
					-pervasive limonite	7.00	8.38	1.38	N113625	73	0.23%	31	334	0	
8.38	11.80	3.42	S	PHBS	porphyritic basalt "aphanitic"										
					-strong to pervasive limonite	8.38	9.75	1.37	N113626	34	0.17%	25	220	<0.2	
					-minor hematite	9.75	10.97	1.22	N113627	88	0.22%	39	554	<0.2	
						10.97	11.80	0.83	N113628	98	0.16%	43	510	<0.2	
11.80	13.37	1.57	S	PHBS	porphyritic basalt "aphanitic"										
					-strong limonite	11.80	13.37	1.57	N113629	54	0.20%	41	428	<0.2	
13.37	16.72	3.35	S	PHBS	porphyritic basalt with malachite "aphanitic"										
					-moderate limonite and malachite	13.37	14.93	1.56	N113630	54	0.45%	35	258	<0.2	0.45
					-weak hematite	14.93	15.85	0.92	N113631	80	0.99%	36	320	<0.2	0.99
					-trace black wad	15.85	16.72	0.87	N113632	67	0.34%	68	1125	<0.2	0.34
16.72	18.90	2.18	T	PHBS	porphyritic basalt "aphanitic"										
					-weak hematite	16.72	18.29	1.57	N113640	78	135	66	816	<0.2	0.01
					-trace native copper	18.29	18.90	0.61	N113641	95	470	53	674	<0.2	0.05
18.90	29.57	10.67	T	BRBS	breccia basalt "aphanitic"										
					-minor limonite and hematite	18.90	20.42	1.52	N113633	83	351	68	864	<0.2	
					-trace cuprite and native copper	20.42	21.95	1.53	N113634	87	162	76	1165	<0.2	
						21.95	23.47	1.52	N113635	89	62	124	1370	<0.2	
						23.47	25.00	1.53	N113636	86	122	113	1320	<0.2	
						25.00	26.52	1.52	N113637	100	50	106	1155	<0.2	
						26.52	28.04	1.52	N113638	89	55	115	1300	<0.2	
						28.04	29.57	1.53	N113639	86	77	38	178	<0.2	
29.57	34.14	4.57	F	BRBS	breccia basalt "aphanitic"										
					-chlorite-epidote veins										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-51 | **Property:** ICE | **Section:** 11,000 N

Easting:	Northing:	Elevation:	Depth:
376,550.67	6,862,583.30	1,279.49	29.57

Logger: Sefika Lesnikoff
Drilling Dates: Aug 29-30, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	3.35	2.13	T	OBDH	overburden										
3.35	11.30	7.95	S	PHBS	porphyritic basalt with malachite "aphanitic"										
					-strong limonite	3.35	5.18	1.83	N113642	33	0.35%	37	240	<0.2	
					-moderate malachite	5.18	6.25	1.07	N113643	93	0.35%	47	360	<0.2	
					-trace black wad	6.25	7.16	0.91	N113644	65	0.28%	49	332	<0.2	
						7.16	8.67	1.51	N113645	93	0.56%	121	836	<0.2	
						8.67	9.82	1.15	N113646	71	0.35%	43	218	<0.2	
						9.82	11.30	1.48	N113647	84	0.53%	46	216	<0.2	
11.30	13.11	1.81	S	PHBS	porphyritic basalt "aphanitic"										
					-strong limonite and hematite	11.30	12.65	1.35	N113648	61	0.45%	43	406	<0.2	
					-weak cuprite	12.65	13.11	0.46	N113649	91	0.39%	75	1255	<0.2	
13.11	18.07	4.96	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite and hematite	13.11	14.02	0.91	N113650	84	0.29%	70	1215	<0.2	
					-weak cuprite and malachite	14.02	14.94	0.92	N113651	91	0.30%	94	1355	<0.2	
					-trace black wad	14.94	15.85	0.91	N113652	98	0.23%	59	632	<0.2	
						15.85	17.07	1.22	N113653	72	0.40%	102	866	<0.2	
						17.07	18.07	1.00	N113654	65	0.31%	71	524	<0.2	
18.07	23.82	5.75	T	BRBS	breccia basalt "aphanitic"										
					-minor limonite	18.07	18.75	0.68	N113655	100	0.09%	45	270	<0.2	
					-trace cuprite, malachite and black wad	18.75	20.12	1.37	N113656	80	311	37	194	<0.2	
						20.12	21.64	1.52	N113657	42	182	40	166	<0.2	
						21.64	22.56	0.92	N113658	96	74	39	136	<0.2	
						22.56	23.82	1.26	N113659	96	99	39	134	<0.2	
23.82	25.60	1.78	S	BRBS	broken breccia basalt "aphanitic"										
					-strong limonite	23.82	25.60	1.78	N113660	77	602	163	752	<0.2	
					-trace cuprite and black wad										
25.60	29.57	3.97	T	BRBS	breccia basalt "aphanitic"										
						25.60	27.13	1.53	N113661	97	161	37	152	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-52 | Property: ICE | Section: 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,570.85	6,862,568.45	1,274.23	34.14	Drilling Dates:	Aug 30, 1997

Depth	0.00				
Azimuth					
Dip	-90				
Method	Brunton				

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	3.03	0.59	T	OBDH	overburden										
3.03	21.20	18.17	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	3.03	3.66	0.63	N113756	83	0.28%	51	670	<0.2	
					-malachite staining from 10.32-11.00m and 17.37-21.20	3.66	5.18	1.52	N113757	77	0.39%	31	298	<0.2	
						5.18	6.71	1.53	N113758	93	0.41%	44	406	<0.2	
						6.71	7.77	1.06	N113759	81	0.37%	39	322	<0.2	
						7.77	9.30	1.53	N113760	97	0.60%	73	794	<0.2	
						9.30	10.52	1.22	N113761	64	0.36%	32	264	<0.2	
						10.52	12.04	1.52	N113762	99	0.30%	32	176	<0.2	
						12.04	13.41	1.37	N113763	91	0.45%	49	378	<0.2	
						13.41	14.94	1.53	N113764	99	0.34%	40	266	<0.2	
						14.94	16.15	1.21	N113765	96	0.58%	34	286	<0.2	
						16.15	17.68	1.53	N113766	97	0.61%	48	602	<0.2	
						17.68	18.29	0.61	N113767	90	0.68%	49	708	<0.2	
						18.29	19.81	1.52	N113768	94	0.75%	49	616	<0.2	
						19.81	21.20	1.39	N113769	99	1.27%	88	1180	0.8	
21.20	23.70	2.50	S	PHBS	porphyritic basalt with malachite "aphanitic"										
					-strong limonite	21.20	22.65	1.45	N113770	99	0.97%	38	322	<0.2	
					-mod hematite and malachite	22.65	23.70	1.05	N113771	97	0.84%	46	434	<0.2	
					-weak cuprite and black wad										
23.70	27.02	3.32	S	PHBS	porphyritic basalt "aphanitic"										
					-strong limonite	23.70	25.48	1.78	N113772	98	0.06%	80	1000	<0.2	
					-trace cuprite	25.48	27.02	1.54	N113773	99	0.21%	173	2590	<0.2	
27.02	28.00	0.98	S	GGBS	gouged porphyritic basalt "aphanitic"										
					-strong limonite	27.02	28.00	0.98	N113774	90	0.09%	243	2050	<0.2	
					-trace black wad										
28.00	30.30	2.30	S	PHBS	porphyritic basalt "aphanitic"										
					-strong limonite	28.00	29.42	1.42	N113775	96	0.18%	68	766	<0.2	
					-weak cuprite	29.42	30.30	0.88	N113776	100	0.27%	92	1190	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-52 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
30.30	31.65	1.35	S	PHBS	limonitized porphyritic basalt "aphanitic"										
					-pervasive limonite	30.30	31.65	1.35	N113777	100	1210	247	1800	<0.2	
					-trace black wad										
31.65	33.50	1.85	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	31.65	32.61	0.96	N113778	99	137	73	314	<0.2	
						32.61	33.50	0.89	N113779	100	153	33	142	<0.2	
33.50	34.13	0.63	T	BRBS	breccia basalt "aphanitic"										
						33.50	34.13	0.63	N113780	100	100	33	128	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-53 **Property:** ICE **Section:** 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,580.77	6,862,561.03	1,270.94	37.19	Drilling Dates:	August 31, 1997

Depth	0.00
Azimuth	115
Dip	-70
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.00	0.78		OBDH	overburden										
2.00	2.44	0.44	T	BRBS	breccia basalt "aphanitic"										
2.44	3.66	1.22	S	BRBS	limonitized breccia basalt "aphanitic"										
					-50% limonitic soil	2.44	3.66	1.22	N113781	80	0.41%	20	144	1.0	
3.66	5.64	1.98	T	BRBS	breccia basalt "aphanitic"										
					-slightly to moderately limonitic	3.66	5.64	1.98	N113782	91	0.24%	29	208	<0.2	
5.64	12.05	6.41	S	BRBS	limonitized breccia basalt "aphanitic"										
					-intensively broken	5.64	7.62	1.98	N113783	85	0.39%	57	548	<0.2	
					-moderately to strongly limonitic	7.62	8.84	1.22	N113784	98	0.27%	35	244	<0.2	
						8.84	10.50	1.66	N113785	66	0.26%	31	248	<0.2	
						10.50	12.05	1.55	N113786	79	0.49%	50	460	<0.2	
12.05	19.20	7.15	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite along fractures	12.05	13.87	1.82	N113787	100	0.25%	48	372	<0.2	
					-from 15.00 weak malachite	13.87	15.39	1.52	N113788	93	0.17%	36	224	<0.2	
						15.39	17.20	1.81	N113789	93	0.30%	28	192	<0.2	
						17.20	19.20	2.00	N113790	72	0.35%	36	240	<0.2	
19.20	23.00	3.80	S	GGBS	gouged breccia basalt with malachite "aphanitic"										
					-moderate malachite and weak black wad	19.20	21.03	1.83	N113791	100	1.74%	45	318	0.2	
					-trace cuprite	21.03	23.00	1.97	N113792	100	1.43%	46	256	<0.2	
23.00	24.20	1.20	S	GGBS	gouged breccia basalt "aphanitic"										
					-pervasive limonite	23.00	24.20	1.20	N113793	100	1100	235	2330	<0.2	
					-weak cuprite										
24.20	34.60	10.40	T	BRBS	breccia basalt "aphanitic"										
					-trace native copper	24.20	25.30	1.10	N113794	49	535	72	242	<0.2	
						25.30	26.82	1.52	N113795	100	81	51	294	<0.2	
						26.82	28.42	1.60	N113796	85	64	56	280	<0.2	
						28.42	30.02	1.60	N113797	92	87	49	206	<0.2	
						30.02	31.42	1.40	N113798	75	89	45	192	<0.2	
						31.42	32.77	1.35	N113799	100	89	50	242	<0.2	
						32.77	34.60	1.83	N113800	97	86	51	256	<0.2	
34.60	37.19	2.59	F	GGBS	gouged and altered breccia basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-53 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-strongly calcareous	34.60	36.42	1.82	N113801	100	116	73	448	0.40	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-54 | Property: ICE | Section: 10,950 N

Easting:	Northing:	Elevation:	Depth:
376,512.87	6,862,549.16	1,269.36	34.14

Logger: Sefika Lesnikoff
Drilling Dates: Sept 1, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	3.60	0.55	T	OBDH	overburden										
3.60	12.80	9.20	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	3.60	5.48	1.88	N113802	63	803	54	1270	<0.2	
						5.48	7.31	1.83	N113803	56	110	31	386	<0.2	
						7.31	8.83	1.52	N113804	100	127	26	192	<0.2	
						8.83	9.90	1.07	N113805	100	76	28	130	<0.2	
						9.90	11.43	1.53	N113806	100	93	66	444	<0.2	
						11.43	12.80	1.37	N113807	76	133	87	1040	<0.2	
12.80	15.84	3.04	S	RBCH	ribbon bedded chert										
					-strong limonite	12.80	14.32	1.52	N113808	98	247	39	496	<0.2	
						14.32	15.84	1.52	N113809	29	356	40	274	<0.2	
15.84	17.19	1.35	S	BRBS	breccia basalt "aphanitic"										
					-pervasive limonite	15.84	17.19	1.35	N113810	97	1285	109	1030	<0.2	
17.19	34.13	16.94	T	RBCH	ribbon bedded chert										
					-at 21.07 m bedding 28°, foliation 48°	17.19	18.59	1.40	N113811	78	85	19	152	<0.2	
						18.59	20.11	1.52	N113812	95	93	15	134	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC97-55	Property:	ICE	Section:	11,200 N
Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,710.17	6,862,714.19	1,289.05	35.97	Drilling Dates:	Sept 2, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	3.65	0.60	T	OBDH	overburden										
3.65	4.57	0.92	S	PHBS	porphyritic basalt "aphanitic"										
					-pervasive limonite	3.65	4.57	0.92	N113722	80	0.44%	80	1540	<0.2	
4.57	7.03	2.46	T	PHBS	decomposed porphyritic basalt "aphanitic"										
					-from 6.63-7.03m malachite staining	4.57	7.03	2.46	N113723	47	1.83%	65	475	<0.2	
7.03	12.03	5.00	T	PHBS	brecciated porphyritic basalt "aphanitic"										
					-weathered	7.03	8.07	1.04	N113724	88	2.36%	60	575	<0.2	
					-weak malachite	8.07	8.83	0.76	N113725	68	3.49%	100	1150	<0.2	
					-moderate cuprite	8.83	10.05	1.22	N113726	58	0.53%	135	995	<0.2	
						10.05	11.27	1.22	N113727	80	0.73%	200	2570	<0.2	
						11.27	12.03	0.76	N113728	89	0.80%	175	2660	<0.2	
12.03	16.30	4.27	S	PHBS	weakly brecciated porphyritic basalt "aphanitic"										
					-strong limonite	12.03	13.71	1.68	N113729	100	0.53%	90	1185	<0.2	
					-weak cuprite and black wad	13.71	14.78	1.07	N113730	100	0.59%	70	1225	<0.2	
						14.78	16.30	1.52	N113731	80	0.44%	75	1800	<0.2	
16.30	17.25	0.95	S	SHBS	sheared porphyritic basalt "aphanitic"										
					-strong limonite	16.30	17.25	0.95	N113732	100	0.50%	350	6820	<0.2	
17.25	21.37	4.12	S	PHBS	brecciated porphyritic basalt "aphanitic"										
					-strong limonite	17.25	17.83	0.58	N113733	105	0.20%	65	1180	<0.2	
					-weak cuprite	17.83	18.89	1.06	N113734	96	0.29%	60	1155	<0.2	
						18.89	20.42	1.53	N113735	87	0.25%	70	1165	<0.2	
						20.42	21.37	0.95	N113736	85	1.95%	165	1115	<0.2	
21.37	22.24	0.87	T	SHBS	sheared porphyritic basalt "aphanitic"										
					-minor limonite	21.37	22.24	0.87	N113737	80	0.46%	302	9830	<0.2	
22.24	23.98	1.74	T	SSSG	stringer sulphides										
					-basalt fragments	22.24	23.46	1.22	N113738	98	0.59%	199	8620	2	
					-red hematite-quartz-pyrite matrix	23.46	23.98	0.52	N113739	98	0.47%	74	7250	<0.2	
					-quartz-pyrite stringers										
23.98	25.29	1.31	T	BRBS	breccia basalt "aphanitic"										
						23.98	25.29	1.31	N113740	100	0.27%	140	4770	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-55 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						25.29	25.90	0.61	N113741	100	0.12%	90	2270	<0.2	
25.29	28.80	3.51	F	BRBS	breccia basalt										
					-red hematite-chlorite matrix										
28.80	32.20	3.40	F	BRBS	breccia basalt "aphanitic"										
					-chlorite matrix										
32.20	35.70	3.50	F	FBBS	faulted breccia basalt "aphanitic"										
35.70	35.96	0.26	F	BRBS	breccia basalt "aphanitic"										
					-chlorite±red hematite matrix										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-56 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,699.80	6,862,784.33	1,319.22	77.11	Drilling Dates:	Sept 3-5, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	9.90	8.68	S	PHBS	porphyritic basalt "aphanitic"										
					-tectonic breccia	1.22	2.43	1.21	N113813	60	0.19%	14	66	0.6	
					-pervasive limonite	2.43	4.26	1.83	N113814	100	0.21%	31	190	0.8	
						4.26	5.79	1.53	N113815	100	0.27%	43	300	0.4	
						5.79	7.76	1.97	N113816	99	0.31%	38	358	0.6	
						7.76	9.90	2.14	N113817	100	0.28%	35	398	1.8	
9.90	16.65	6.75	S	GGBS	tectonized porphyritic basalt "aphanitic"										
					-tectonic breccia	9.90	11.89	1.99	N113818	100	0.27%	27	562	2.4	
					-pervasive limonite	11.89	13.41	1.52	N113819	100	0.21%	20	330	4.2	
					-80-90% shattered or gouged core	13.41	14.94	1.53	N113820	98	0.26%	21	290	4.2	
						14.94	16.65	1.71	N113821	94	0.20%	9	132	7.8	
16.65	17.98	1.33	S	PHBS	porphyritic basalt "aphanitic"										
					-strongly limonitic tectonic breccia	16.65	17.98	1.33	N113822	80	0.20%	27	458	<0.2	
17.98	22.45	4.47	S	PHBS	limonitic porphyritic basalt "aphanitic"										
					-bleached	17.98	19.51	1.53	N113823	100	0.37%	22	470	1.4	
					-intensively limonitic	19.51	21.03	1.52	N113824	93	0.22%	11	334	2.6	
					-minor red chert	21.03	22.45	1.42	N113825	91	0.48%	35	1220	<0.2	
22.45	34.90	12.45	T	PHBS	porphyritic basalt "aphanitic"										
					-porphyritic breccia basalt	22.45	24.08	1.63	N113826	99	0.32%	43	1040	<0.2	
					-moderate limonite	24.08	25.60	1.52	N113827	98	0.36%	29	652	<0.2	
					-trace malachite	25.60	27.13	1.53	N113828	100	0.34%	34	624	<0.2	
						27.13	28.65	1.52	N113829	100	0.31%	32	422	<0.2	
						28.65	30.15	1.50	N113830	91	0.38%	25	216	<0.2	
						30.15	31.70	1.55	N113831	100	0.27%	26	242	<0.2	
						31.70	33.22	1.52	N113832	95	0.24%	26	280	<0.2	
						33.22	34.90	1.68	N113833	93	0.29%	36	468	<0.2	
34.90	38.45	3.55	S	BSPY	pyrite with basalt fragments "aphanitic"										
					-30% pyrite stringers	34.90	36.50	1.60	N113834	100	0.68%	160	454	0.4	
					-moderately to strongly weathered with heavy	36.50	38.45	1.95	N113835	100	2.81%	133	392	0.2	
					limonite along fractures										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-56 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
38.45	62.80	24.35	T	BRBS	aphanitic breccia basalt "aphanitic"										
					-moderate to weak, locally strong malachite and cuprite	38.45	40.39	1.94	N113836	91	0.92%	100	990	<0.2	
					-at 58.60-60.00 shattered and gouged core with	40.39	42.15	1.76	N113837	100	0.24%	90	760	<0.2	
					moderate malachite and cuprite	42.15	43.89	1.74	N113838	90	0.04%	55	255	<0.2	
						43.89	45.42	1.53	N113839	100	0.12%	60	530	<0.2	
						45.42	46.94	1.52	N113840	91	0.09%	50	355	<0.2	
						46.94	48.46	1.52	N113841	95	0.03%	55	315	<0.2	
						48.46	49.99	1.53	N113842	99	0.11%	95	770	<0.2	
						49.99	51.51	1.52	N113843	97	0.67%	140	2710	<0.2	
						51.51	53.04	1.53	N113844	92	0.56%	85	1640	<0.2	
						53.04	54.56	1.52	N113845	100	0.53%	70	975	<0.2	
						54.56	56.08	1.52	N113846	97	0.42%	80	1140	<0.2	
						56.08	57.40	1.32	N113847	96	0.63%	80	1095	<0.2	
						57.40	58.67	1.27	N113848	100	0.5%	85	1310	<0.2	
						58.67	60.20	1.53	N113849	99	1.03%	105	1765	<0.2	
						60.20	61.57	1.37	N113850	100	0.26%	65	770	<0.2	
						61.57	62.80	1.23	N113851	100	1.08%	80	1180	<0.2	
62.80	77.11	14.31	T	BRBS	faulted breccia basalt "aphanitic"										
					-70% broken or gouged core	62.80	64.31	1.51	N113852	95	1.76	100	1620	<0.2	
					-moderate to strong limonite	64.31	65.23	0.92	N113853	98	0.92%	95	1680	<0.2	
					-moderate cuprite	65.23	66.75	1.52	N113854	91	0.85%	110	2110	<0.2	
					-weak malachite	66.75	68.30	1.55	N113855	63	1.43%	105	2130	<0.2	
					-trace black wad	68.30	69.80	1.50	N113856	79	1.27%	110	2520	<0.2	
						69.80	71.30	1.50	N113857	66	0.31%	75	2020	<0.2	
						71.30	72.85	1.55	N113858	59	0.41%	70	1590	<0.2	
						72.85	74.37	1.52	N113859	84	0.28%	70	1190	<0.2	
						74.37	75.74	1.37	N113860	100	0.31%	85	1205	<0.2	
						75.74	77.11	1.37	N113861	93	0.70%	135	2430	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-57 | **Property:** ICE | **Section:** 11,200 N

Easting:	Northing:	Elevation:	Depth:
376,730.03	6,862,699.30	1,291.59	41.76

Logger: Kosta Lesnikoff
Drilling Dates: Sept 3-5, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.30	3.30		CSDH	casing										
3.30	11.12	7.82		OBDH	overburden										
					-ferricrete at 10.70-11.12m	9.75	11.12	1.37	N113862	82	4180	24	164	1.6	
11.12	12.00	0.88	S	XXLI	limonitic sand										
					-oxidized sulphide mud	11.12	12.00	0.88	N113863	63	238	4	236	66.4	
12.00	13.25	1.25	F	PYMS	sulphide mud										
						12.00	13.25	1.25	N113864	44	795	30	330	5.0	
13.25	16.50	3.25	F	PYMS	broken massive sulphides										
					-moderate chalcopyrite and chalcocite	13.25	14.80	1.55	N113865	65	2.96%	210	455	6.0	
					-weak black wad	14.80	16.50	1.70	N113866	76	4.24%	190	805	3.0	
16.50	20.80	4.30	F	PYMS	massive sulphides										
					-moderate to strong chalcopyrite, chalcocite and	16.50	18.29	1.79	N113867	78	3.72%	210	2540	4.0	
					black wad	18.29	19.81	1.52	N113868	59	5.78%	275	7030	6.0	
						19.81	20.80	0.99	N113869	100	11.60%	580	10090	9.0	
20.80	22.90	2.10	S	PHBS	sulphide rich massive basalt "aphanitic"										
					-white bleached basalt	20.80	22.10	1.30	N113870	73	3.78%	165	195	<0.2	
					-disseminated chalcocite and chalcopyrite veinlets	22.10	22.90	0.80	N113871	66	3.97%	220	65	<0.2	
22.90	26.35	3.45	T	PHBS	porphyritic basalt "aphanitic"										
					-moderately to strongly fractured with strong	22.90	24.84	1.94	N113872	97	2.32%	140	340	<0.2	
					limonite along fractures	24.84	26.35	1.51	N113873	98	2.87%	150	375	<0.2	
26.35	28.25	1.90	S	PHBS	tectonized porphyritic basalt "aphanitic"										
					-tectonic breccia with pyritic matrix	26.35	28.25	1.90	N113874	89	4.26%	610	420	3.0	
28.25	30.48	2.23	S	HEPY	tectonized hematitic pyrite										
						28.25	29.35	1.10	N113875	100	4.09%	590	2260	7.0	
						29.35	30.48	1.13	N113876	100	4.37%	425	6120	7.0	
30.48	40.50	10.02	T	FBBS	fault breccia										
					-melange of basalt hematitic pyrite, grey chert, hematitic	30.48	31.70	1.22	N113877	82	2.26%	130	2320	1.0	
					mudstone and semi-massive sulphide fragments	31.70	32.92	1.22	N113878	86	3.57%	245	8420	3.0	
					-pyrite in matrix	32.92	34.14	1.22	N113879	87	2.87%	215	2540	1.0	
						34.14	35.66	1.52	N113880	91	1.30%	320	1545	1.0	
						35.66	37.19	1.53	N113881	93	1.00%	260	2850	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-57 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						37.19	38.70	1.51	N113882	73	1.05%	325	3650	1.0	
						38.70	40.50	1.80	N113883	91	1.07%	160	4190	<0.2	
40.50	41.76	1.26	T	BRBS	breccia basalt "aphanitic"										
					-epidote altered	40.50	41.76	1.26	N113884	93	0.39%	205	6530	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-58 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,680.22	6,862,799.19	1,324.31	39.93

Logger: Sefika Lesnikoff
Drilling Dates: Sept 6-7, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.00	0.78	S	BRBS	broken breccia basalt "aphanitic"										
					-pervasive limonite	1.22	2.00	0.78	N113742	100	0.18%	23	502	1.4	
2.00	3.45	1.45	S	BRBS	limonitized breccia basalt "aphanitic"										
					-pervasive limonite	2.00	3.45	1.45	N113743	81	0.40%	72	1070	2.0	
3.45	11.70	8.25	S	BRBS	broken breccia basalt "aphanitic"										
					-pervasive limonite	3.45	4.85	1.40	N113744	89	0.22%	26	650	0.8	
						4.85	6.10	1.25	N113745	90	890	16	526	0.4	
						6.10	7.01	0.91	N113746	98	1065	13	518	0.6	
						7.01	8.69	1.68	N113747	73	885	16	386	0.2	
						8.69	10.21	1.52	N113748	97	835	13	310	0.6	
						10.21	11.70	1.49	N113749	71	1145	15	328	0.4	
11.70	21.86	10.16	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	11.70	13.11	1.41	N113750	85	0.18%	19	680	0.2	
						13.11	14.63	1.52	N113901	103	0.33%	27	476	0.8	
						14.63	16.15	1.52	N113902	93	0.22%	34	674	<0.2	
						16.15	17.66	1.51	N113903	91	0.17%	26	574	<0.2	
						17.66	19.35	1.69	N113904	86	0.17%	29	564	<0.2	
						19.35	20.88	1.53	N113905	90	0.27%	33	682	<0.2	
						20.88	21.86	0.98	N113906	100	0.16%	28	924	<0.2	
21.86	23.47	1.61	S	BRBS	broken breccia basalt "aphanitic"										
					-strong limonite	21.86	23.47	1.61	N113907	92	0.19%	36	378	<0.2	
23.47	38.40	14.93	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	23.47	24.99	1.52	N113908	94	0.06%	46	236	<0.2	
					-weak cuprite and malachite	24.99	25.60	0.61	N113909	98	0.24%	39	230	<0.2	
						25.60	27.13	1.53	N113910	99	220	29	148	<0.2	
						27.13	28.65	1.52	N113911	100	1080	45	242	<0.2	
						28.65	29.41	0.76	N113912	99	750	34	214	<0.2	
						29.41	30.78	1.37	N113913	85	83	27	102	<0.2	
						30.78	32.31	1.53	N113914	97	0.38%	61	604	<0.2	
						32.31	33.83	1.52	N113915	84	128	42	224	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-58 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						33.83	35.36	1.53	N113916	91	70	28	130	<0.2	
						35.36	36.88	1.52	N113917	91	226	34	176	<0.2	
						36.88	38.40	1.52	N113918	91	259	37	186	<0.2	
38.40	39.93	1.53	T	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-59 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,659.79	6,862,813.99	1,332.65	39.32

Logger: Sefika Lesnikoff
Drilling Dates: Sept 7-8, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	3.30	0.25	T	OBDH	overburden										
3.30	4.27	0.97	S	BRBS	strongly limonitized breccia basalt "aphanitic"										
					-pervasive limonite	3.30	4.27	0.97	N113976	68	0.52%	25	232	3.8	
4.27	8.80	4.53	S	BRBS	breccia basalt "aphanitic"										
					-srtrong limonite	4.27	5.79	1.52	N113977	74	0.31%	30	374	1.4	
						5.79	7.31	1.52	N113978	78	0.20%	40	872	0.6	
						7.31	8.80	1.49	N113979	82	0.27%	43	682	0.4	
8.80	12.28	3.48	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	8.80	10.06	1.26	N113980	83	0.18%	33	630	0.2	
						10.06	11.58	1.52	N113981	100	0.21%	38	794	<0.2	
						11.58	12.28	0.70	N113982	73	0.36%	57	642	<0.2	
12.28	15.76	3.48	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	12.28	13.11	0.83	N113983	100	0.30%	43	324	<0.2	
						13.11	14.63	1.52	N113984	87	0.33%	40	260	<0.2	
						14.63	15.76	1.13	N113985	87	0.49%	62	572	<0.2	
15.76	16.70	0.94	S	GGBS	gouged breccia basalt "aphanitic"										
					-strong limonite	15.76	16.70	0.94	N113986	98	0.78	138	1280	<0.2	
					-trace cuprite										
16.70	19.15	2.45	S	BRBS	breccia basalt										
					-strong limonite	16.70	17.68	0.98	N113987	96	0.67	75	662	<0.2	
					-trace cuprite	17.68	19.15	1.47	N113988	93	0.31	44	492	<0.2	
					-weak malachite and black wad										
19.15	20.24	1.09	S	BRBS	weakly tectonized breccia basalt "aphanitic"										
					-strong limonite	19.15	20.24	1.09	N113989	83	0.64%	67	568	<0.2	
					-moderately malachite										
					-weak cuprite										
20.24	29.26	9.02	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	20.24	21.03	0.79	N113990	75	0.31%	28	208	<0.2	
					-weak malachite and cuprite	21.03	22.25	1.22	N113991	97	599	63	428	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-59 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						22.25	22.86	0.61	N113992	92	87	51	208	<0.2	
						22.86	24.08	1.22	N113993	91	84	35	116	<0.2	
						24.08	25.60	1.52	N113994	99	407	44	278	<0.2	
						25.60	27.13	1.53	N113995	82	326	49	354	<0.2	
						27.13	28.35	1.22	N113996	100	0.25%	54	916	<0.2	
						28.35	29.26	0.91	N113997	98	0.50%	74	1130	0.2	
29.26	39.32	10.06	S	SGBS	stringer basalt "aphanitic"										
					-strong limonite	29.26	30.78	1.52	N113998	87	0.48%	81	428	0.6	
					-trace cuprite	30.78	31.70	0.92	N113999	100	0.80%	96	268	4.0	
						31.70	33.22	1.52	N114000	93	0.16%	41	446	0.2	
						33.22	34.75	1.53	N114001	85	0.30%	78	556	0.6	
						34.75	36.27	1.52	N114002	86	0.08%	46	658	<0.2	
						36.27	37.80	1.53	N114003	88	0.24%	48	646	0.2	
						37.80	39.32	1.52	N114004	90	568	49	836	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-60 | Property: ICE | Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,625.28	6,862,770.01	1,324.85	53.64	Drilling Dates:	Sept 8-10, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.09	0.87		OBDH	overburden										
2.09	4.71	2.62	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	2.09	3.05	0.96	N114005	100	0.30%	40	820	<0.2	
					-weak malachite	3.05	4.27	1.22	N114006	100	0.22%	37	672	<0.2	
						4.27	4.71	0.44	N114007	100	0.39%	33	562	<0.2	
4.71	6.50	1.79	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	4.71	5.39	0.68	N114008	100	0.33%	42	506	<0.2	
					-trace malachite	5.39	6.50	1.11	N114009	80	0.38%	42	650	<0.2	
6.50	8.83	2.33	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	6.50	7.31	0.81	N114010	90	0.24%	46	676	<0.2	
						7.31	8.83	1.52	N114011	68	0.55%	53	630	<0.2	
8.83	11.88	3.05	S	BRBS	heavily weathered breccia basalt "aphanitic"										
					-pervasive limonite	8.83	10.36	1.53	N114012	100	0.41%	37	398	0.8	
						10.36	11.88	1.52	N114013	81	0.43%	29	386	0.8	
11.88	14.44	2.56	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	11.88	13.41	1.53	N114014	85	0.32%	37	258	2.2	
					-weak black wad	13.41	14.44	1.03	N114015	95	0.36%	50	386	3.6	
14.44	22.56	8.12	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	14.44	15.39	0.95	N114016	85	0.17%	42	860	<0.2	
					-trace malachite	15.39	16.46	1.07	N114017	93	0.35%	32	782	<0.2	
						16.46	17.98	1.52	N114018	86	0.13%	30	736	0.2	
						17.98	19.51	1.53	N114019	90	0.25%	35	594	<0.2	
						19.51	21.03	1.52	N114020	82	0.21%	37	500	0.2	
						21.03	22.56	1.53	N114021	88	0.26%	44	566	<0.2	
22.56	33.30	10.74	S	SGBS	very weak stringer sulphides "aphanitic"										
					-strong limonite	22.56	23.77	1.21	N114022	94	0.41%	36	908	1.2	
					-basalt fragments	23.77	25.30	1.53	N114023	92	0.29%	62	862	1.8	
					-chlorite matrix	25.30	26.43	1.13	N114024	81	0.50%	111	1640	3.4	
					-quartz-pyrite stringers	26.43	27.13	0.70	N114025	100	0.27%	43	918	2.6	
						27.13	28.65	1.52	N114026	95	0.13%	38	938	1.4	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-60 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						28.65	30.18	1.53	N114027	85	0.29%	52	1800	3.4	
						30.18	31.70	1.52	N114028	97	0.42%	47	2480	7.8	
						31.70	33.30	1.60	N114029	93	0.32%	52	1510	5.6	
33.30	40.91	7.61	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	33.30	34.44	1.14	N114030	98	1120	48	1230	0.6	
					-trace cuprite	34.44	35.97	1.53	N114031	87	306	34	544	<0.2	
						35.97	37.49	1.52	N114032	82	157	30	248	<0.2	
						37.49	38.25	0.76	N114033	100	239	34	386	<0.2	
						38.25	39.78	1.53	N114034	90	764	41	372	<0.2	
						39.78	40.91	1.13	N114038	91	764	41	372	<0.2	
40.91	44.65	3.74	S	SSSG	stringer sulphides "aphanitic"										
					-strong limonite	40.91	42.37	1.46	N114035	95	1.42%	303	596	2.0	
					-basalt fragments	42.37	43.89	1.52	N114036	100	0.54%	160	380	0.6	
					-chlorite matrix	43.89	44.65	0.76	N114037	97	0.99%	251	1360	1.4	
					-pyrite-quartz-red hematite stringers										
					-pyrite-chalcopyrite stringers										
44.65	51.51	6.86	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	44.65	45.42	0.77	N114039	95	938	95	1605	<0.2	
					-trace cuprite	45.42	46.94	1.52	N114040	86	695	66	552	<0.2	
						46.94	48.16	1.22	N114041	100	162	48	518	<0.2	
						48.16	49.07	0.91	N114042	87	294	52	810	<0.2	
						49.07	49.99	0.92	N114043	82	140	35	148	<0.2	
51.51	53.64	2.13	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-61 | Property: ICE | Section: 11,150 N

Easting:	Northing:	Elevation:	Depth:
376,737.29	6,862,627.97	1,280.61	40.84

Logger: Sefika Lesnikoff
Drilling Dates: Sept 10-11, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	1.62	0.40	T	OBDH	overburden										
1.62	15.09	13.47	S	BRBS	breccia basalt "aphanitic"										
					- stong limonite	1.62	3.51	1.89	N114044	66	165	33	142	<0.2	
					- trace malachite	3.51	4.42	0.91	N114045	87	214	28	104	<0.2	
						4.42	5.94	1.52	N114046	89	733	37	282	<0.2	
						5.94	6.71	0.77	N114047	104	346	31	130	<0.2	
						6.71	8.23	1.52	N114048	93	644	36	192	<0.2	
						8.23	9.14	0.91	N114049	65	366	35	178	<0.2	
						9.14	10.82	1.68	N114050	55	156	33	140	<0.2	
						10.82	12.04	1.22	N114051	73	74	32	114	<0.2	
						12.04	13.56	1.52	N114052	88	94	37	186	<0.2	
						13.56	15.09	1.53	N114053	90	96	38	176	<0.2	
15.09	40.84	25.75	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-62 | **Property:** ICE | **Section:** 11,300 N

Easting:	Northing:	Elevation:	Depth:
376,769.74	6,862,794.12	1,318.05	80.47

Logger: Sefika Lesnikoff
Drilling Dates: Sept 10-12, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.74	1.52	T	OBDH	overburden										
2.74	13.41	10.67	T	MSBS	broken massive basalt "grainy"										
					-trace cuprite	2.74	4.27	1.53	N114201	100	96	28	100	<0.2	
						4.27	5.18	0.91	N114202	100	101	28	104	<0.2	
						5.18	6.40	1.22	N114203	100	408	45	682	<0.2	
						6.40	7.32	0.92	N114204	95	1110	45	526	<0.2	
						7.32	8.38	1.06	N114205	100	1005	75	1285	<0.2	
						8.38	9.75	1.37	N114206	100	290	29	204	<0.2	
						9.75	11.28	1.53	N114207	97	600	36	348	<0.2	
						11.28	12.19	0.91	N114208	92	333	32	238	<0.2	
						12.19	13.41	1.22	N114209	98	288	37	374	<0.2	
13.41	19.20	5.79	S	MSBS	heavily fractured massive basalt "grainy"										
					-strong limonite	13.41	14.63	1.22	N114210	97	1095	60	1300	<0.2	
						14.63	16.13	1.50	N114211	100	196	92	816	<0.2	
						16.13	17.68	1.55	N114212	100	741	72	920	<0.2	
						17.68	19.20	1.52	N114213	100	0.25%	56	1110	<0.2	
19.20	22.76	3.56	S	XXLI	limonitic soil										
					-strong limonite	19.20	20.73	1.53	N114214	42	0.10%	32	334	3	
						20.73	22.25	1.52		0					
						22.25	22.76	0.51	N114215	100	0.24%	13	316	<0.2	
22.76	28.65	5.89	S	PHBS	porphyritic basalt "aphanitic"										
					-strong limonite	22.76	24.08	1.32	N114216	84	0.15%	35	574	<0.2	
					-weak cuprite	24.08	25.60	1.52	N114217	96	0.33%	57	1130	<0.2	
						25.60	27.13	1.53	N114218	100	0.34%	45	974	<0.2	
						27.13	28.65	1.52	N114219	91	0.55%	58	1660	<0.2	
28.65	30.79	2.14	T	PHBS	porphyritic basalt "aphanitic"										
					-moderate limonite	28.65	30.02	1.37	N114220	100	250	57	930	<0.2	
					-trace cuprite	30.02	30.79	0.77	N114221	100	1190	58	1530	<0.2	
30.79	36.27	5.48	S	PHBS	broken porphyritic basalt "aphanitic"										
					-strong limonite	30.79	31.55	0.76	N114222	100	1030	50	1220	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-62 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-weak cuprite and malachite	31.55	32.61	1.06	N114223	95	1395	53	1395	<0.2	
						32.61	33.22	0.61	N114224	84	0.56%	50	1460	<0.2	
						33.22	34.75	1.53	N114225	88	0.39%	43	996	<0.2	
						34.75	36.27	1.52	N114226	100	1030	50	1220	<0.2	
36.27	51.51	15.24	T	PHBS	brecciated porphyritic basalt "aphanitic"										
					-moderate limonite	36.27	37.80	1.53	N114227	93	280	45	644	<0.2	
						37.80	39.32	1.52	N114228	96	152	48	860	<0.2	
						39.32	40.84	1.52	N114229	100	108	25	100	<0.2	
						40.84	42.37	1.53	N114230	100	100	30	158	<0.2	
						42.37	43.89	1.52	N114231	100	115	46	538	<0.2	
						43.89	45.42	1.53	N114232	100	230	72	1485	<0.2	
						45.42	46.94	1.52	N114233	98	115	42	536	<0.2	
						46.94	48.46	1.52	N114234	97	118	42	538	<0.2	
						48.46	49.99	1.53	N114235	99	101	40	612	<0.2	
						49.99	51.51	1.52	N114236	99	88	33	148	<0.2	
51.51	64.45	12.94	F	BRBS	breccia basalt "aphanitic"										
64.45	66.75	2.30	F	BRBS	veined breccia basalt "aphanitic"										
					-quartz±calcite veins										
66.75	73.75	7.00	F	FLBS	fault breccia basalt "aphanitic"										
					-solid or heavily fractured intervals										
73.75	75.38	1.63	F	BRBS	breccia basalt "aphanitic"										
75.38	78.64	3.26	F	BRBS	broken breccia basalt "aphanitic"										
					-70% broken and gouged core										
78.64	80.47	1.83	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-63 | Property: ICE | Section: 11,150 N | Depth 0.00 | Azimuth

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff	Dip -90
376,720.71	6,862,643.79	1,281.72	29.11	Drilling Dates:	Sept 11, 1997	Method Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	1.83	0.61		OBDH	overburden										
1.83	10.20	8.37	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	1.83	3.20	1.37	N114092	100	1500	37	164	<0.2	
						3.20	4.57	1.37	N114093	100	1495	28	144	<0.2	
						4.57	6.10	1.53	N114094	100	1490	29	178	<0.2	
						6.10	7.62	1.52	N114095	100	0.32%	35	200	<0.2	
						7.62	8.90	1.28	N114096	100	0.22%	33	174	<0.2	
						8.90	10.20	1.30	N114097	100	0.27%	38	216	<0.2	
10.20	11.20	1.00	S	BRBS	breccia basalt with malachite "aphanitic"										
					-pervasive limonite										
					-weak malachite										
					-trace black wad	10.20	11.20	1.00	N114098	100	1.00%	42	268	<0.2	
11.20	16.46	5.26	T	BRBS	breccia basalt "aphanitic"										
					-weak cuprite	11.20	12.80	1.60	N114099	94	0.55%	38	262	<0.2	
					-moderate malachite	12.80	14.33	1.53	N114100	100	0.73%	41	268	<0.2	
						14.33	15.40	1.07	N114166	86	0.97%	37	400	<0.2	
						15.40	16.46	1.06	N114167	95	0.55%	26	148	<0.2	
16.46	19.00	2.54	T	BRBS	breccia basalt with cuprite "aphanitic"										
					-moderate cuprite and limonite	16.46	17.98	1.52	N114168	100	0.60%	34	220	<0.2	
						17.98	19.00	1.02	N114169	100	0.62%	48	514	<0.2	
19.00	19.70	0.70	T	GGBS	gouged breccia basalt										
					-weak cuprite and limonite	19.00	19.70	0.70	N114170	91	1260	72	1405	<0.2	
19.70	23.45	3.75	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite	19.70	20.88	1.18	N114171	100	332	73	774	<0.2	
23.45	26.30	2.85	T	BRBS	hematite stained breccia basalt "aphanitic"										
26.30	29.11	2.81	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-64 | **Property:** ICE | **Section:** 11,150 N

Easting:	Northing:	Elevation:	Depth:
376,699.54	6,862,659.33	1,280.55	36.88

Logger: Sefika Lesnikoff
Drilling Dates: Sept 12-13, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments
0.00	2.85	2.85		CSDH	casing
2.85	6.55	3.70	T	OBDH	overburden
6.55	11.28	4.73	S	XXLI	boxwork after sulphide
11.28	21.95	10.67	T	FLMS	faulted massive sulphides
					-moderate limonite
					-weak chalcocite and covellite
21.95	24.69	2.74	S	PYMS	broken and oxidized massive sulphides
					-strong limonite
					-moderate to strong chalcocite
					-trace chalcopyrite
24.69	27.30	2.61	S	HEPY	hematitic pyrite
					-strong limonite
					-weak chalcocite, cuprite and black wad
27.30	33.68	6.38	T	FLBS	faulted breccia basalt "aphanitic"
					-weak limonite and chalcocite
33.68	36.88	3.20	F	BRBS	breccia basalt "aphanitic"
					EOH

From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
6.55	8.08	1.53	N114151	90	798	3	12	1.00	
8.08	11.28	3.20	N114152	33	612	1	8	0.80	
11.28	15.85	4.57	N114153	18	472	188	28	0.80	
15.85	17.22	1.37	N114154	57	0.13%	180	30	1.00	
17.22	21.95	4.73	N114155	13	0.73%	227	62	1.40	
21.95	23.47	1.52	N114156	68	2.15%	193	624	1.20	
23.47	24.69	1.22	N114157	27	4.12%	184	860	2.20	
24.69	26.21	1.52	N114158	66	4.14%	98	680	4.40	
26.21	27.30	1.09	N114159	89	2.97%	99	4310	1.60	
27.30	28.19	0.89	N114160	100	1.54%	52	1455	0.60	
28.19	29.41	1.22	N114161	78	1.09%	109	1325	0.20	
29.41	31.09	1.68	N114162	57	1.68%	86	2730	<0.2	
31.09	32.46	1.37	N114163	39	0.76%	109	1990	<0.2	
32.46	33.68	1.22	N114164	100	557	120	1360	<0.2	
33.68	35.36	1.68	N114165	84	194	39	130	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole:	IC97-65	Property:	ICE	Section:	11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,750.34	6,862,808.90	1,323.15	33.22	Drilling Dates:	Sept 12-13, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	4.27	3.05	F	OBDH	overburden										
4.27	7.32	3.05	S	XXLI	limonitic sand										
					-completely weathered, decomposed massive sulphides	4.27	7.32	3.05	N114172	10	590	12	218	55.40	
7.32	10.36	3.04	S	PHBS	altered porphyritic basalt "aphanitic"										
					-white, bleached basalt	7.32	10.36	3.04	N114173	18	927	17	314	9.20	
10.36	15.30	4.94	S	PHBS	intensively weathered porphyritic basalt "aphanitic"										
					-strong limonite	10.36	12.19	1.83	N114174	91	0.14%	23	370	0.80	
					-trace to weak cuprite	12.19	13.75	1.56	N114175	100	0.24%	31	764	<0.2	
						13.75	15.30	1.55	N114176	65	0.22%	52	1240	<0.2	
15.30	21.75	6.45	T	PHBS	porphyritic basalt "aphanitic"										
						15.30	16.80	1.50	N114177	99	506	42	544	<0.2	
						16.80	18.29	1.49	N114178	100	301	55	1430	<0.2	
21.75	33.22	11.47	T	PHBS	veined porphyritic basalt "aphanitic"										
					-carbonate-chlorite and late quartz-epidote veins										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-66 | Property: ICE | Section: 11,050 N

Easting:	Northing:	Elevation:	Depth:
376,680.80	6,862,549.12	1,263.27	17.37

Logger: Kosta Lesnikoff
Drilling Dates: Sept 13-14, 1997

Depth	0.00
Azimuth	
Dip	-90.00
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments
0.00	1.90	1.90		CSDH	casing
1.90	5.68	3.78	T	OBDH	overburden
5.68	10.97	5.29	S	BRBS	breccia basalt "apanitic"
					-weak cuprite
					-trace native copper
10.97	13.00	2.03	F	BRBS	breccia basalt "apanitic"
					-trace cuprite and native copper
13.00	17.37	4.37	F	MSBS	massive basalt "grainy"
					-transitional type between BRBS and MSBS
					EOH

From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
4.30	5.60	1.30	N114179	75	0.34%	31	210	<0.2	
5.60	6.86	1.26	N114180	100	0.26%	36	184	<0.2	
6.86	8.38	1.52	N114181	91	0.45%	35	208	<0.2	
8.38	9.75	1.37	N114182	100	0.76%	58	576	<0.2	
9.75	10.97	1.22	N114183	100	538	49	440	<0.2	
10.97	12.50	1.53	N114184	100	299	38	270	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-67 **Property:** ICE **Section:** 11,350 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,799.60	6,862,834.47	1,325.04	44.81	Drilling Dates:	Sept 14-15, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.44	1.22	T	OBDH	overburden										
2.44	4.88	2.44	S	MSBS	oxidized calcareous massive basalt "grainy"										
					-pervasive limonite	2.44	3.66	1.22	N114237	100	65	35	116	<0.2	
						3.66	4.88	1.22	N114238	100	70	32	92	<0.2	
4.88	6.30	1.42	S	CAVN	limonitic calcite vein										
					-strong limonite	4.88	6.30	1.42	N114239	88	43	27	130	<0.2	
6.30	10.97	4.67	S	MSBS	massive basalt "grainy"										
					-strong limonite	6.30	7.92	1.62	N114240	100	107	33	130	<0.2	
						7.92	9.45	1.53	N114241	93	60	28	102	<0.2	
						9.45	10.97	1.52	N114242	93	89	43	428	<0.2	
10.97	20.22	9.25	S	MSBS	massive basalt "grainy"										
					-strong limonite	10.97	12.19	1.22	N114243	79	401	30	566	<0.2	
						12.19	13.41	1.22	N114244	100	421	41	902	<0.2	
						13.41	16.15	2.74	N114245	93	150	32	254	<0.2	
						16.15	17.68	1.53	N114246	86	78	27	134	<0.2	
						17.68	19.51	1.83	N114247	92	68	29	112	<0.2	
						19.51	20.22	0.71	N114248	100	1095	34	794	<0.2	
20.22	22.56	2.34	S	MSBS	broken massive basalt "grainy"										
					-strong limonite	20.22	21.34	1.12	N114249	59	0.14%	47	1080	<0.2	
					-weak cuprite	21.34	22.56	1.22	N114250	97	0.27%	73	2560	<0.2	
22.56	28.70	6.14	S	PHBS	porphyritic breccia basalt "aphanitic"										
					-strong limonite	22.56	24.08	1.52	N114251	95	0.14%	33	924	<0.2	
					-weak cuprite	24.08	25.60	1.52	N114252	84	199	26	446	<0.2	
28.70	36.30	7.60	S	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	32.61	34.14	1.53	N114253	100	878	48	1485	<0.2	
					-trace cuprite										
36.30	44.81	8.51	F	BRBS	breccia basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-68 | Property: ICE | Section: 11,050 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,660.98	6,862,563.19	1,264.20	17.98	Drilling Dates:	Sept 14-15, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.30	3.30		CSDH	casing										
3.30	4.00	0.70	F	OBDH	overburden										
4.00	13.11	9.11	T	BRBS	breccia basalt "aphanitic"										
					-trace to weak malachite	4.00	5.50	1.50	N114185	100	0.18%	28	108	<0.2	
					-trace cuprite	5.50	7.01	1.51	N114186	59	0.14%	28	90	<0.2	
						7.01	8.38	1.37	N114187	99	0.13%	24	96	<0.2	
						8.38	10.36	1.98	N114188	22	0.24%	37	294	<0.2	
						10.36	13.11	2.75	N114189	47	238	54	700	<0.2	
13.11	17.98	4.87	F	MSBS	massive basalt "grainy"										
					-transitional type between MSBS and BRBS	13.11	14.48	1.37	N114190	92	102	35	374	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC97-69 | **Property:** ICE | **Section:** 11,000 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,611.14	6,862,537.90	1,265.76	31.39	Drilling Dates:	Sept 15-16, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.00	3.00		CSDH	casing										
3.00	3.66	0.66	F	OBDH	overburden										
3.66	5.40	1.74	S	BRBS	grainy breccia basalt (?) "grainy"										
					-pervasive limonite	3.66	5.40	1.74	N114191	81	0.26%	13	84	<0.2	
5.40	12.50	7.10	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	5.40	6.40	1.00	N114192	100	0.25%	10	100	<0.2	
						6.40	7.92	1.52	N114193	91	0.23%	8	82	<0.2	
						7.92	9.45	1.53	N114194	98	0.33%	16	130	<0.2	
						9.45	10.97	1.52	N114195	100	0.36%	10	168	<0.2	
						10.97	12.50	1.53	N114196	100	0.40%	14	468	1	
12.50	15.60	3.10	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	12.50	14.02	1.52	N114197	93	0.55%	23	1090	<0.2	
					-trace pyrite in matrix	14.02	15.60	1.58	N114198	89	0.47%	23	280	<0.2	
15.60	16.65	1.05	T	SHBS	sheared breccia basalt "aphanitic"										
					-moderate limonite	15.60	16.65	1.05	N114199	93	1.20%	21	226	<0.2	
16.65	20.95	4.30	T	BRBS	breccia basalt "aphanitic"									<0.2	
					-weak limonite, cuprite and malachite	16.65	17.50	0.85	N114200	100	0.40%	18	246	<0.2	
						17.50	18.75	1.25	N114301	100	0.41%	24	160	<0.2	
						18.75	20.95	2.20	N114302	93	0.36%	22	100	<0.2	
20.95	23.05	2.10	T	BRBS	breccia basalt with cuprite "aphanitic"										
					-moderate limonite and cuprite	20.95	21.95	1.00	N114303	92	1.18%	26	112	<0.2	
						21.95	23.05	1.10	N114304	100	1.71%	34	96	<0.2	
23.05	24.70	1.65	T	MSBS	strained massive basalt "grainy"										
					-moderate limonite and cuprite	23.05	24.70	1.65	N114305	100	2.83%	36	144	<0.2	
24.70	25.85	1.15	T	BRBS	strained breccia basalt "aphanitic"										
					-moderate limonite	24.70	25.85	1.15	N114306	95	1.35%	85	866	<0.2	
					-weak cuprite										
25.85	31.39	5.54	F	BRCH	ribbon bedded chert										
						25.85	27.43	1.58	N114307	63	0.25%	47	598	<0.2	
						27.43	28.96	1.53	N114308	76	0.26%	29	242	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-70 | **Property:** ICE | **Section:** 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Drilling Dates:
376,788.96	6,862,779.96	1,309.76	49.38	Sefika Lesnikoff	Sept 15-16, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	4.42	3.20		OBDH	overburden										
4.42	20.22	15.80	T	MSBS	massive basalt "grainy"										
					-moderate limonite	4.42	5.79	1.37	N114254	100	723	43	624	<0.2	
					-trace cuprite	5.79	7.01	1.22	N114255	100	115	32	120	<0.2	
						7.01	8.84	1.83	N114256	100	117	30	108	<0.2	
						8.84	10.21	1.37	N114257	100	73	24	72	<0.2	
						10.21	12.50	2.29	N114258	95	128	29	138	<0.2	
						17.68	20.22	2.54	N114259	79	78	33	102	<0.2	
20.22	21.34	1.12	T	MSCH	massive grey chert										
					-moderate limonite	20.22	21.34	1.12	N114260	55	607	23	410	<0.2	
21.34	22.66	1.32	T	MSBS	massive basalt "grainy"										
					-weakly brecciated	21.34	22.66	1.32	N114261	74	1210	65	1230	<0.2	
22.66	23.77	1.11	S	MSBS	broken and veined massive basalt "grainy"										
					-strong limonite	22.66	23.77	1.11	N114262	100	0.39%	178	3980	<0.2	
					-Qz±calcite veins										
23.77	30.97	7.20	T	MSBS	massive basalt "grainy"										
					-moderate limonite	23.77	25.60	1.83	N114263	95	0.04%	62	1280	<0.2	
					-trace cuprite	29.87	30.97	1.10	N114264	100	0.42%	57	1320	<0.2	
30.97	33.14	2.17	T	HECH	hematitic chert										
					-weak limonite and malachite	30.97	32.71	1.74	N114265	91	1.89%	20	248	<0.2	
					-moderate cuprite	32.71	33.14	0.43	N114266	100	3.34%	26	172	3	
					-trace black wad										
33.14	37.08	3.94	T	PYMS	massive sulphides										
					-primary brecciated texture	33.14	34.75	1.61	N114267	78	1.96%	412	802	4	
					-moderate to strong chalcopyrite	34.75	36.42	1.67	N114268	100	4.32%	585	798	19	
						36.42	37.08	0.66	N114269	100	7.55%	743	358	30	
37.08	38.40	1.32	F	PHBS	porphyritic basalt with cuprite "aphanitic"										
					-strong cuprite	37.08	38.40	1.32	N114270	90	3.62%	37	704	<0.2	
38.40	49.38	11.13	F	PHBS	porphyritic basalt "aphanitic"										
						38.40	39.32	0.92	N114271	98	0.05%	92	2550	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-70 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						39.32	40.84	1.52	N114355	99	153	112	1830	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-71 | Property: ICE | Section: 10,950 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,581.54	6,862,498.61	1,257.58	26.21	Drilling Dates:	Sept 16, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.05	2.05		CSDH	casing										
2.05	3.35	1.30	F	OBDH	overburden										
3.35	7.35	4.00	S	MSBS	massive basalt "grainy"										
					-pervasive limonite	3.35	5.35	2.00	N114309	99	0.29%	22	176	<0.2	
					-strained	5.35	7.35	2.00	N114310	100	0.30%	21	166	<0.2	
7.35	15.85	8.50	T	RBCH	ribbon bedded chert										
					-strong limonite	7.35	10.56	3.21	N114311	94	998	4	48	<0.2	
						10.56	13.10	2.54	N114312	82	882	3	42	<0.2	
						13.10	15.85	2.75	N114313	100	431	1	20	<0.2	
15.85	21.90	6.05	T	CBMS	carbonaceous mudstone										
					-moderate limonite	15.85	18.44	2.59	N114314	88	694	1	32	<0.2	
21.90	26.21	4.31	T	RBCH	ribbon bedded chert										
					-moderate limonite										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-72 | Property: ICE | Section: 10,950 N | Depth 0.00 | Azimuth

Easting:	Northing:	Elevation:	Depth:	Logger:	Dip	-90
376,600.67	6,862,483.15	1,253.57	27.43	Drilling Dates: Sept 17, 1997	Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.05	3.05		CSDH	casing										
3.05	4.67	1.62	F	OBDH	overburden										
4.67	9.75	5.08	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	4.67	6.10	1.43	N114272	100	813	23	164	<0.2	
					-trace cuprite and malachite	6.10	7.62	1.52	N114273	100	890	24	146	<0.2	
						7.62	9.14	1.52	N114274	81	115	28	112	<0.2	
						9.14	9.75	0.61	N114275	100	462	29	144	<0.2	
9.75	14.00	4.25	T	BRBS	strained breccia basalt "aphanitic"										
					-moderate limonite	9.75	11.28	1.53	N114276	83	0.39%	28	200	<0.2	
					-weak malachite	11.28	12.61	1.33	N114277	99	0.48%	37	196	<0.2	
					-trace cuprite and black wad	12.61	14.00	1.39	N114278	95	1.79%	40	244	<0.2	
14.00	20.72	6.72	T	RBCH	ribbon bedded basalt										
					-strong limonite	14.00	14.94	0.94	N114279	66	0.21%	9	156	<0.2	
						14.94	16.46	1.52	N114280	92	0.18%	6	110	<0.2	
						16.46	17.53	1.07	N114281	85	0.28%	15	220	<0.2	
						17.53	19.35	1.82	N114282	46	1745	4	92	<0.2	
						19.35	20.72	1.37	N114283	91	1770	5	88	<0.2	
20.72	22.84	2.12	F	CBMS	carbonaceous mudstone										
					-broken										
22.84	27.43	4.59	T	RBCH	ribbon bedded chert										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-73 | **Property:** ICE | **Section:** 11,300 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,731.53	6,862,822.88	1,328.61	32.92	Drilling Dates:	Sept 17-17, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	2.10	0.27		OBDH	overburden										
2.10	7.10	5.00	S	MSBS	massive basalt "grainy"										
					-extremely weathered	2.10	3.66	1.56	N114284	53	0.24%	110	1625	<0.2	
						3.66	7.10	3.44	N114285	50	0.38%	32	1035	<0.2	
7.10	7.32	0.22	S	XXLI	boxwork after sulphides										
						7.10	7.32	0.22	N114286	100	0.28%	61	198	113 g/t	
7.32	8.53	1.21	T	PYMS	massive sulphides										
					-moderate chalcopyrite	7.32	8.53	1.21	N114287	100	8.43%	671	1.42%	41	
					-strong chalcocite										
8.53	11.73	3.20	S	PHBS	weathered porphyritic basalt "aphanitic"										
					-strong limonite	8.53	10.06	1.53	N114288	100	0.77%	78	472	1	
					-weak malachite	10.06	11.73	1.67	N114289	100	1.30%	75	2410	<0.2	
11.73	17.68	5.95	T	PHBS	porphyritic basalt "aphanitic"										
					-minor limonite	11.73	13.41	1.68	N114290	81	0.44%	44	798	<0.2	
					-weak cuprite and malachite	13.41	14.78	1.37	N114291	79	0.24%	32	342	<0.2	
					-trace black wad	14.78	16.31	1.53	N114292	92	0.01%	25	86	<0.2	
						16.31	17.68	1.37	N114293	85	0.03%	27	140	<0.2	
17.68	29.15	11.47	F	BRBS	breccia basalt "aphanitic"										
					-weak limonite	17.68	19.20	1.52	N114294	88	416	26	136	<0.2	
						19.20	20.73	1.53	N114295	99	66	24	112	<0.2	
29.15	32.92	3.77	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-74 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,719.51	6,862,769.43	1,311.96	49.99

Logger: Kosta Lesnikoff
Drilling Dates: Sept 18-19, 1997

Depth 0.00 | Azimuth | Dip -90 | Method Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	12.80	11.58	S	PHBS	porphyritic breccia basalt with weak stringer "aphanitic"										
					-pervasive limonite	1.22	2.74	1.52	N114329	68	0.24%	16	210	1.4	
					-pyrite stringers in matrix only	2.74	4.27	1.53	N114330	93	0.24%	13	124	0.6	
					-up to 25cm intervals of boxwork after stringer sulphides	4.27	5.80	1.53	N114331	100	0.28%	14	148	0.2	
						5.80	7.32	1.52	N114332	100	0.19%	13	170	<0.2	
						7.32	8.84	1.52	N114333	100	0.24%	57	116	0.2	
						8.84	10.80	1.96	N114334	90	0.32%	74	176	<0.2	
						10.80	12.80	2.00	N114335	89	0.23%	51	214	<0.2	
12.80	28.50	15.70	T	PHBS	porphyritic basalt "aphanitic"										
					-moderate limonite	12.80	14.94	2.14	N114336	98	0.37%	41	308	0.2	
					-trace cuprite	14.94	16.34	1.40	N114337	100	0.24%	30	464	<0.2	
						16.34	18.29	1.95	N114500	100	997	26	470	0.2	
						18.29	19.51	1.22	N114556	98	1685	30	638	0.6	
						19.51	21.03	1.52	N114557	97	732	31	564	<0.2	
						21.03	22.56	1.53	N114558	87	1190	34	308	<0.2	
						22.56	24.08	1.52	N114559	84	1200	38	284	<0.2	
						24.08	25.45	1.37	N114560	96	1135	34	184	<0.2	
						25.45	26.98	1.53	N114561	100	1280	35	220	<0.2	
						26.98	28.50	1.52	N114562	98	0.21%	48	418	<0.2	
28.50	35.10	6.60	T	PHBS	porphyritic breccia basalt with weak "aphanitic"										
					stringer sulphides	28.50	29.72	1.22	N114563	98	0.19%	38	296	<0.2	
						29.72	30.95	1.23	N114564	100	0.32%	51	384	<0.2	
						30.95	32.16	1.21	N114565	100	0.21%	56	386	<0.2	
						32.16	33.68	1.52	N114566	94	0.21%	43	238	<0.2	
						33.68	35.10	1.42	N114567	100	0.52%	40	492	1.2	
35.10	39.32	4.22	T	PHBS	weakly porphyritic basalt "aphanitic"										
						35.10	36.27	1.17	N114568	95	530	36	504	<0.2	
						36.27	37.80	1.53	N114569	100	171	24	430	<0.2	
						37.80	39.32	1.52	N114570	97	1950	43	1250	0.2	
39.32	49.99	10.67	F	BRBS	breccia basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-74 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
						39.32	40.84	1.52	N114571	98	927	43	502	<0.2	
						40.84	42.37	1.53	N114572	94	157	32	210	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-75 | **Property:** ICE | **Section:** 11,000 N | Depth 0.00 | Azimuth

Easting:	Northing:	Elevation:	Depth:	Logger:	Dip -90
376,631.43	6,862,523.02	1,260.97	31.09	Drilling Dates: Sept 18, 1997	Method Brunton

Logger: Kosta Lesnikoff

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	3.50	3.50		CSDH	casing										
3.50	6.00	2.50		OBDH	overburden										
6.00	7.92	1.92	S	BRBS	breccia basalt "aphanitic"										
					-strongly limonitic	6.00	7.92	1.92	N114315	100	0.45%	25	362	<0.2	
					-trace malachite										
7.92	23.93	16.01	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	7.92	9.45	1.53	N114316	100	0.47%	17	836	<0.2	
					-weak cuprite	9.45	11.35	1.90	N114317	79	0.51%	17	506	<0.2	
					-trace malachite	11.35	13.26	1.91	N114318	87	0.39%	18	396	<0.2	
						13.26	14.78	1.52	N114319	95	0.29%	22	146	<0.2	
						14.78	16.31	1.53	N114320	100	0.24%	22	172	<0.2	
						16.31	18.29	1.98	N114321	88	0.25%	21	384	<0.2	
						18.29	19.81	1.52	N114322	96	0.25%	27	220	<0.2	
						19.81	21.34	1.53	N114323	100	0.41%	28	152	<0.2	
						21.34	22.71	1.37	N114324	100	0.24%	36	242	<0.2	
						22.71	23.93	1.22	N114325	100	0.59%	40	252	<0.2	
23.93	28.19	4.26	F	BRBS	strained breccia basalt "aphanitic"										
					-disseminated pyrite in matrix	23.93	26.67	2.74	N114326	100	0.06%	43	342	<0.2	
						26.67	28.19	1.52	N114327	100	0.09%	58	522	<0.2	
28.19	29.65	1.46	T	BRBS	breccia basalt "aphanitic"										
					-trace native copper	28.19	29.65	1.46	N114328	100	0.64%	139	1630	<0.2	
29.65	31.09	1.44	F	RBCH	ribbon bedded chert										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC97-76 | Property: ICE | Section: 11,000 N

Easting:	Northing:	Elevation:	Depth:
376,651.28	6,862,508.65	1,257.54	31.09

Logger: Sefika Lesnikoff
Drilling Dates: Sept 19, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments		From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing											
1.83	4.42	2.59	F	OBDH	overburden											
4.42	6.15	1.73	T	MSBS	broken massive basalt	"grainy"										
6.15	18.44	12.29	T	MSBS	massive basalt	"grainy"										
					-weak cuprite and malachite		6.15	7.62	1.47	N114296	99	0.46%	33	172	<0.2	
							7.62	9.14	1.52	N114297	97	0.67%	31	216	<0.2	
							9.14	10.67	1.53	N114298	87	0.53%	35	246	<0.2	
							10.67	12.19	1.52	N114299	100	0.14%	32	312	<0.2	
							12.19	13.11	0.92	N114300	76	142	37	360	<0.2	
							13.11	14.48	1.37	N114351	89	75	51	630	<0.2	
							14.48	15.85	1.37	N114352	96	0.32%	58	672	<0.2	
							15.85	17.53	1.68	N114353	100	0.24%	83	894	<0.2	
							17.53	18.44	0.91	N114354	88	0.26%	82	938	<0.2	
18.44	25.47	7.03	F	MSBS	massive basalt	"grainy"										
25.47	31.09	5.62	F	MSBS	massive basalt	"grainy"										
					-epidote±quartz±chlorite veins											
					-epidote altered											
					EOH											

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-77 | **Property:** ICE | **Section:** 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,740.31	6,862,754.17	1,304.57	45.42

Logger: Kosta Lesnikoff
Drilling Dates: Sept 19-20, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	7.32	6.10	T	MSBS	massive basalt "grainy"										
					-moderate limonite	1.22	2.74	1.52	N114338	100	132	27	126	<0.2	
					-trace malachite and azurite	2.74	4.27	1.53	N114339	97	179	28	108	<0.2	
						4.27	5.79	1.52	N114340	93	581	35	338	<0.2	
						5.79	7.32	1.53	N114341	86	0.48%	101	2350	<0.2	
7.32	8.84	1.52	S	MSBS	weathered massive basalt "grainy"										
					-pervasive limonite	7.32	8.84	1.52	N114342	53	1.06%	33	486	<0.2	
8.84	18.00	9.16	S	XXLI	boxwork after massive sulphides										
					-trace chalcocite and black wad	8.84	11.89	3.05		0					
					-pervasive limonite	11.89	13.41	1.52	N114343	58	483	7	162	59	
						13.41	14.94	1.53	N114344	86	530	3	64	53	
						14.94	16.46	1.52		0					
						16.46	18.00	1.54	N114345	31	131	3	84	60	
18.00	19.51	1.51	S	PHBS	weathered porphyritic basalt "aphanitic"										
					-bleached	18.00	19.51	1.51	N114346	65	0.66%	22	614	<0.2	
					-pervasive limonite										
19.51	29.87	10.36	T	PHBS	porphyritic basalt "aphanitic"										
					-moderate limonite	19.51	21.34	1.83	N114347	97	1.16%	40	458	<0.2	
					-weak malachite	21.34	23.01	1.67	N114348	93	0.54%	53	696	<0.2	
					-trace cuprite	23.01	24.38	1.37	N114349	96	0.26%	95	1865	<0.2	
					-weak breccia texture	24.38	25.91	1.53	N114350	92	0.19%	88	1260	<0.2	
						25.91	27.13	1.22	N114401	107	0.10%	132	2110	<0.2	
						27.13	28.35	1.22	N114402	82	0.27%	125	2290	<0.2	
						28.35	29.87	1.52	N114403	93	0.20%	142	4450	<0.2	
29.87	33.50	3.63	T	PHBS	porphyritic breccia basalt "aphanitic"										
					-weak limonite	29.87	31.09	1.22	N114404	100	904	110	2280	<0.2	
33.50	34.40	0.90	T	PHBS	porphyritic basalt "aphanitic"										
34.40	35.20	0.80	T	CAVN	calcite vein										
35.20	36.10	0.90	T	PHBS	porphyritic basalt "aphanitic"										
36.10	40.84	4.74	F	PHBS	porphyritic basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-77 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
40.84	45.42	4.58	F	PHBS	porphyritic basalt "aphanitic"										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-78 | Property: ICE | Section: 11,050 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,641.29	6,862,578.09	1,268.79	31.09	Drilling Dates:	Sept 20, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	2.44	2.44		CSDH	casing										
2.44	3.66	1.22	T	OBDH	overburden										
3.66	5.38	1.72	S	XXLI	ferricrete										
						3.66	5.38	1.72	N114356	100	0.31%	21	188	<0.2	
5.38	7.00	1.62	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	5.38	7.00	1.62	N114357	100	0.26%	26	166	<0.2	
7.00	14.02	7.02	T	FBBS	faulted breccia basalt "aphanitic"										
					-moderate to strong limonite	7.00	7.92	0.92	N114358	100	0.16%	24	128	<0.2	
					-moderate cuprite	7.92	9.14	1.22	N114359	100	0.62%	27	126	<0.2	
						9.14	10.67	1.53	N114360	100	0.34%	25	118	<0.2	
						10.67	12.19	1.52	N114361	100	1.23%	29	204	<0.2	
						12.19	13.41	1.22	N114362	100	0.52%	28	134	<0.2	
						13.41	14.02	0.61	N114363	100	0.44%	29	148	<0.2	
14.02	17.07	3.05	T	BRBS	broken breccia basalt "aphanitic"										
					-weak limonite	14.02	15.54	1.52	N114364	100	0.40%	28	196	<0.2	
					-moderate cuprite	15.54	17.07	1.53	N114365	100	0.97%	31	352	<0.2	
17.07	18.61	1.54	T	GGBS	gouged breccia basalt "aphanitic"										
					-moderate cuprite	17.07	18.61	1.54	N114366	97	1.83%	132	3220	<0.2	
18.61	31.09	12.48	F	MSBS	massive basalt "grainy"										
						18.61	20.42	1.81	N114367	96	0.25%	85	1685	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-79 | Property: ICE | Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Sefika Lesnikoff
376,649.61	6,862,758.48	1,316.39	49.99	Drilling Dates:	Sept 20-21, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.14	0.92	T	OBDH	overburden										
2.14	22.06	19.92	T	PHBS	porphyritic breccia basalt "aphanitic"										
					-strong limonite	2.14	3.35	1.21	N114368	100	1340	38	245	<0.2	
					-weak *malachite*	3.35	4.72	1.37	N114369	100	1100	33	184	<0.2	
					-trace cuprite and black wad	4.72	6.25	1.53	N114370	88	820	35	150	<0.2	
						6.25	8.23	1.98	N114371	95	1030	30	142	<0.2	
						8.23	9.75	1.52	N114372	84	943	28	134	<0.2	
						9.75	11.28	1.53	N114373	100	1790	39	172	<0.2	
						11.28	12.80	1.52	N114374	96	1365	31	144	<0.2	
						12.80	14.78	1.98	N114375	89	1215	34	150	<0.2	
						14.78	16.31	1.53	N114376	100	1060	33	164	<0.2	
						16.31	17.83	1.52	N114377	100	0.2%	26	196	<0.2	
						17.83	19.51	1.68	N114378	100	0.26%	25	298	<0.2	
						19.51	21.03	1.52	N114379	100	0.19%	29	286	<0.2	
						21.03	22.06	1.03	N114380	100	0.23%	31	302	<0.2	
22.06	30.74	8.68	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite	22.06	23.62	1.56	N114381	100	0.30%	44	310	<0.2	
					-trace black wad	23.62	25.30	1.68	N114382	90	562	40	374	1	
						25.30	26.96	1.66	N114383	96	297	38	1000	1	
						26.96	28.32	1.36	N114384	93	293	41	1265	<0.2	
						28.32	29.57	1.25	N114385	94	0.15%	36	1245	<0.2	
						29.57	30.74	1.17	N114386	100	0.23%	59	1170	<0.2	
30.74	35.10	4.36	S	SGBS	stringer basalt "aphanitic"										
					-strong limonite	30.74	32.61	1.87	N114387	100	0.36%	64	1015	<0.2	
					-*basalt fragments*	32.61	34.14	1.53	N114388	95	0.32%	74	1540	<0.2	
					-pyrite-quartz-red hematite matrix/stringers	34.14	35.10	0.96	N114389	94	0.10%	73	1750	<0.2	
35.10	38.91	3.81	S	SGBS	stringer basalt "aphanitic"										
					-moderate limonite	35.10	36.06	0.96	N114390	100	0.22%	126	1065	<0.2	
					-trace cuprite	36.06	37.19	1.13	N114391	100	0.36%	99	884	<0.2	
						37.19	38.91	1.72	N114392	97	0.19%	57	1090	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-79 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
38.91	47.22	8.31	S	BRBS	breccia basalt "aphanitic"										
					-strong limonite	38.91	40.23	1.32	N114393	100	0.10%	70	1210	<0.2	
					-trace cuprite and malachite	40.23	41.76	1.53	N114394	98	0.29%	72	1530	<0.2	
						41.76	42.98	1.22	N114395	100	0.39%	87	2010	<0.2	
						42.98	44.50	1.52	N114396	100	0.18%	90	1530	<0.2	
						44.50	45.72	1.22	N114397	100	0.46%	68	1585	<0.2	
						45.72	47.22	1.50	N114398	100	0.21%	66	2310	<0.2	
47.22	48.65	1.43	T	SGBS	stringer basalt "aphanitic"										
					-moderate limonite	47.22	48.65	1.43	N114399	88	0.24%	62	1200	3	
48.65	49.99	1.34	T	BRBS	breccia basalt "aphanitic"										
						48.65	49.99	1.34	N114400	100	1245	59	1075	1	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-80 | **Property:** ICE | **Section:** 10,950 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,553.28	6,862,519.46	1,253.78	26.82	Drilling Dates:	Sept 21-21, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	17.25	15.42	S	FLBS	faulted breccia basalt "aphanitic"										
					-strongly to completely weathered and decomposed	3.96	9.75	5.79	N114405	16	0.12%	294.0	1725	<0.2	
					breccia basalt	9.75	11.13	1.38	N114406	96	0.19%	180.0	1750	<0.2	
						11.13	13.11	1.98	N114407	76	137	172.0	1240	<0.2	
						13.11	14.63	1.52	N114408	100	84	37.0	80	<0.2	
						14.63	15.85	1.22	N114409	100	83	38.0	78	<0.2	
						15.85	17.25	1.40	N114410	86	97	37.0	82	<0.2	
17.25	19.20	1.95	T	CAVN	carbonate vein with basalt fragments										
					-approximately 60% calcite vein	17.25	19.20	1.95	N114411	100	39	25.0	64	<0.2	
19.20	22.86	3.66	F	FLBS	faulted and gouged basalt										
					-80% shattered and gouged basalt	19.20	20.88	1.68	N114412	83	89	38.0	110	<0.2	
						20.88	22.86	1.98	N114413	100	85	35	96	<0.2	
22.86	25.00	2.14	F	BRBS	aphanitic breccia basalt "aphanitic"										
25.00	26.15	1.15	F	FLBS	faulted basalt										
26.15	26.82	0.67	F	RBCH	tectonized ribbon bedded chert										
					-sheared in first 50cm										
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-81 | Property: ICE | Section: 11,150 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,620.38	6,862,718.33	1,308.63	45.72	Drilling Dates:	Sept 21-22, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	3.20	1.37	F	OBDH	overburden										
3.20	10.36	7.16	T	BRBS	aphanitic breccia basalt "aphanitic"										
						3.20	4.57	1.37	N114414	87	741	37	360	<0.2	
						4.57	6.40	1.83	N114415	73	574	39	450	<0.2	
						6.40	7.77	1.37	N114416	53	907	37	500	<0.2	
						7.77	9.14	1.37	N114417	100	937	29	680	<0.2	
						9.14	10.36	1.22	no core	0					
10.36	16.60	6.24	T	SGBS	stringer basalt										
					-quartz-pyrite-red hematite stringers	10.36	11.89	1.53	N114418	100	1.40%	152	288	2	
						11.89	13.41	1.52	N114419	95	0.36%	61	432	<0.2	
						13.41	14.94	1.53	N114420	92	0.33%	109	416	<0.2	
						14.94	16.60	1.66	N114421	100	0.46%	175	444	1	
16.60	19.43	2.83	T	PYSG	pyritic stringer sulfides										
					-approximately 60% pyrite	16.60	17.98	1.38	N114422	100	1.56%	429	220	2	
					-interstitial quartz, minor basalt fragments	17.98	19.43	1.45	N114423	100	1.77%	442	280	3	
19.43	20.75	1.32	T	SGBS	stringer basalt										
					-quartz-pyrite stringers	19.43	20.75	1.32	N114424	100	0.25%	293	334	1	
20.75	23.20	2.45	T	BRBS	breccia basalt "aphanitic"										
						20.75	22.00	1.25	N114425	95	0.10%	42	510	<0.2	
						22.00	23.20	1.20	N114426	100	0.12%	28	1080	<0.2	
23.20	26.80	3.60	T	BRBS	breccia basalt with hematitic matrix "aphanitic"										
						23.20	24.40	1.20	N114427	100	0.17%	26	936	<0.2	
						24.40	25.60	1.20	N114428	100	0.17%	29	1170	<0.2	
						25.60	26.80	1.20	N114429	100	0.26%	30	1510	1	
26.80	28.85	2.05	T	SGBS	very weak stringer basalt										
					-weak quartz-chlorite-pyrite stringers	26.80	28.85	2.05	N114430	96	0.35%	101	1480	1	
28.85	30.48	1.63	T	BRBS	aphanitic breccia basalt "aphanitic"										
					-trace cuprite and malachite	28.85	30.48	1.63	N114431	99	907	54	922	<0.2	
30.48	45.72	15.24	F	BRBS	aphanitic breccia basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-81 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-supergene hematite along fractures	30.48	32.30	1.82	N114432	82	188	51	424	<0.2	
					-trace cuprite	32.30	34.14	1.84	N114433	100.00	155	39	210	<0.2	
					EOH										

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-82 | **Property:** ICE | **Section:** 11,200 N

Easting:	Northing:	Elevation:	Depth:
376,694.54	6,862,725.41	1,295.33	46.33

Logger: Sefika Lesnikoff
Drilling Dates: Sept 22-23, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	2.94	1.72	S	XXLI	boxwork after sulphides										
						1.22	2.94	1.72	N114451	59	0.31%	27	192	13	
2.94	7.91	4.97	S	XXLI	limonitic soil										
					-pervasive limonite	2.94	4.16	1.22	N114452	100	0.37%	20	234	8	
						4.16	5.64	1.48	N114453	100	0.48%	24	248	4	
						5.64	6.70	1.06	N114454	98	0.17%	5	322	6	
						6.70	7.91	1.21	N114455	100	0.16%	39	164	17	
7.91	17.93	10.02	S	SSSG	stringer sulphides										
					-strong limonite	7.91	9.75	1.84	N114456	88	1.47%	298	268	15	
					-basalt fragments	9.75	11.28	1.53	N114457	100	1.15%	385	370	9	
					-chloritic matrix	11.28	12.80	1.52	N114458	95	0.28%	276	274	3	
					-pyrite-quartz stringers	12.80	14.33	1.53	N114459	96	0.40%	359	446	2	
						14.33	15.85	1.52	N114460	91	0.53%	211	600	2	
						15.85	17.93	2.08	N114461	100	0.52%	203	614	1	
17.93	21.03	3.10	T	PHBS	broken porphyritic basalt "aphanitic"										
					-moderate limonite	17.93	19.40	1.47	N114462	100	0.54%	70	964	<0.2	
					-weak cuprite	19.40	21.03	1.63	N114463	100	1.26%	52	890	<0.2	
21.03	25.04	4.01	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	21.03	22.56	1.53	N114464	100	0.37%	28	1190	<0.2	
					-weak cuprite	22.56	24.08	1.52	N114465	100	1.66%	54	680	<0.2	
						24.08	25.04	0.96	N114466	94	0.88%	32	722	<0.2	
25.04	29.17	4.13	T	PYSG	pyrite stringers										
					-moderate chalcocite and limonite	25.04	26.30	1.26	N114467	100	0.65%	847	192	<0.2	
					-weak black wad	26.30	27.70	1.40	N114468	91	0.71%	792	276	<0.2	
						27.70	29.17	1.47	N114469	100	4.55%	426	720	<0.2	
29.17	30.37	1.20	S	BRBS	highly oxidized breccia basalt "aphanitic"										
					-strong limonite	29.17	30.37	1.20	N114470	93	3.37%	369	8300	<0.2	
30.37	33.10	2.73	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite	30.37	31.85	1.48	N114471	100	0.25%	104	2640	<0.2	
						31.85	33.10	1.25	N114472	100	458	85	1000	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-82 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
33.10	46.33	13.23	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	33.10	34.75	1.65	N114473	100	232	61	414	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-83 | Property: ICE | Section: 11,150 N

Easting:	Northing:	Elevation:	Depth:
376,639.15	6,862,703.37	1,299.71	46.63

Logger: Sefika Lesnikoff
Drilling Dates: Sept 23-24, 1997

Depth	0,00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	3.04	1.82	T	OBDH	overburden										
3.04	11.67	8.63	S	PHBS	broken porphyritic basalt "aphanitic"										
					-strong limonite	3.04	4.27	1.23	N114474	95	2180	54	1800	<0.2	
						4.27	5.79	1.52	N114475	100	1225	42	630	<0.2	
						5.79	7.32	1.53	N114476	100	672	32	296	<0.2	
						7.32	8.69	1.37	N114477	99	1370	31	332	<0.2	
						8.69	10.36	1.67	N114478	100	1155	29	318	<0.2	
						10.36	11.67	1.31	N114479	100	1385	37	574	<0.2	
11.67	23.62	11.95	S	PHBS	porphyritic breccia basalt "aphanitic"										
					-moderate limonite	11.67	13.41	1.74	N114480	100	1335	30	326	<0.2	
					-trace malachite and black wad	13.41	14.94	1.53	N114481	100	839	29	236	<0.2	
					-trace cuprite and azurite	14.94	16.46	1.52	N114482	98	962	39	424	<0.2	
						16.46	17.98	1.52	N114483	100	1000	44	750	<0.2	
						17.98	19.35	1.37	N114484	100	716	54	890	<0.2	
						19.35	21.18	1.83	N114485	97	115	45	278	<0.2	
						21.18	23.62	2.44	N114486	68	228	49	484	<0.2	
23.62	33.02	9.40	S	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	23.62	25.15	1.53	N114487	88	1365	70	1270	<0.2	
					-weak cuprite	25.15	26.67	1.52	N114488	100	1375	67	1160	<0.2	
						26.67	28.19	1.52	N114489	100	154	36	280	<0.2	
						28.19	29.71	1.52	N114490	97	1010	51	1000	1	
						29.71	31.39	1.68	N114491	100	1190	50	668	<0.2	
						31.39	33.02	1.63	N114492	100	0.20%	36	646	<0.2	
33.02	34.05	1.03	S	SGBS	stringer basalt "aphanitic"										
					-strong limonite	33.02	34.05	1.03	N114493	93	1.74%	79	1050	1	
					-basalt fragments										
					-chloritic matrix										
					-pyrite-quartz stringers										
34.05	36.10	2.05	T	BRBS	breccia basalt "aphanitic"										
					-moderate limonite	34.05	36.10	2.05	N114494	100	0.13%	52	1230	<0.2	

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG Hole: IC97-83 Property: ICE

FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
36.10	40.57	4.47	T	SGBS	very weak stringer basalt "aphanitic"										
					-moderate limonite	36.10	37.80	1.70	N114495	99	0.18%	54	2340	<0.2	
					-basalt fragments	37.80	39.32	1.52	N114496	100	632	57	2200	<0.2	
					-quartz-chlorite-red hematite±pyrite matrix/stringers	39.32	40.57	1.25	N114497	100	471	50	2410	<0.2	
40.57	41.44	0.87	T	CRVN	carbonate vein										
					-weak limonite	40.57	41.44	0.87	N114498	100	469	354	4740	<0.2	
41.44	46.63	5.19	T	BRBS	breccia basalt "aphanitic"										
					-weak limonite	41.44	43.59	2.15	N114499	100	101	50	214	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

EXPATRIATE RESOURCES LTD.

Hole: IC97-84 | Property: ICE | Section: 11,250 N

Easting:	Northing:	Elevation:	Depth:
376,759.64	6,862,738.95	1,296.83	40.23

Logger: Kosta Lesnikoff

Drilling Dates: Sept 23-24, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.22	1.22		CSDH	casing										
1.22	5.79	4.57	S	MSBS	broken massive basalt "grainy"										
					-locally decomposed	1.22	2.74	1.52	N114434	79	84	32	122	<0.2	
					-strong to pervasive limonite	2.74	4.57	1.83	N114435	66	77	34	88	<0.2	
						4.57	5.79	1.22	N114436	99	92	33	90	<0.2	
5.79	10.28	4.49	S	MSBS	intensively weathered massive basalt "grainy"										
					-pervasive limonite	5.79	7.30	1.51	N114437	100	110	34	114	<0.2	
					-locally calcareous	7.30	8.80	1.50	N114438	100	81	34	104	<0.2	
					-minor calcite veins	8.80	10.28	1.48	N114439	100	58	61	1555	<0.2	
10.28	14.17	3.89	T	MSBS	massive basalt "grainy"										
					-weak malachite	10.28	11.89	1.61	N114440	100	996	68	2430	<0.2	
						11.89	14.17	2.28	N114441	100	0.54%	48	1775	<0.2	
14.17	15.65	1.48	S	MSBS	strongly weathered massive basalt "grainy"										
					-pervasive limonite	14.17	15.65	1.48	N114442	78	2.57%	44	1220	<0.2	
					-strong malachite										
15.65	15.85	0.20	T	HECH	hematitic chert										
						15.65	15.85	0.20	N114443	100	0.29%	9	158	1	
15.85	21.95	6.10	F	PYMS	shattered/broken massive sulphides										
					-minor fine grained chalcopyrite	15.85	17.68	1.83	N114444	30	0.48%	552	174	3	
					-moderate chalcocite and black wad	17.68	18.90	1.22	N114445	100	1.92%	619	268	7	
						18.90	20.12	1.22	N114446	100	2.67%	632	552	9	
						20.12	21.95	1.83	N114447	87	2.33%	525	1010	10	
21.95	26.65	4.70	F	PYMS	massive sulphides										
					-massive chalcopyrite with minor bornite	21.95	23.48	1.53	N114448	100	2.84%	403	1620	9	
					-moderate covellite and chalcocite	23.48	24.99	1.51	N114449	91	6.16%	388	986	20	
						24.99	26.65	1.66	N114450	100	8.40%	686	734	28	
26.65	28.25	1.60	F	PHBS	altered porphyritic basalt "aphanitic"										
					-white, bleached basalt	26.65	28.25	1.60	N114551	89	0.70%	80	104	2	
28.25	30.18	1.93	T	PHBS	broken porphyritic basalt with cuprite "aphanitic"										
					-moderate cuprite	28.25	30.18	1.93	N114552	73	1.20%	47	764	<0.2	
30.18	40.23	10.05		PHBS	porphyritic basalt "aphanitic"										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT

Hole: IC97-84 Property: ICE

EXPATRIATE RESOURCES LTD.

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
					-trace native copper @ 30.50-32.00m	30.18	31.70	1.52	N114553	90	0.37%	73	1540	<0.2	
						31.70	33.60	1.90	N114554	100	775	79	1300	<0.2	
						33.60	35.36	1.76	N114555	100	210	47	474	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

SYNOPTIC LOG
FINLAYSON PROJECT
EXPATRIATE RESOURCES LTD.

Hole: IC97-85 | Property: ICE | Section: 11,200 N

Easting:	Northing:	Elevation:	Depth:	Logger:	Kosta Lesnikoff
376,681.10	6,862,735.37	1,298.34	43.28	Drilling Dates:	Sept 24-25, 1997

Depth	0.00
Azimuth	
Dip	-90
Method	Brunton

From (m)	To (m)	Interval (m)	*	Unit	Comments	From (m)	To (m)	Interval (m)	Sample No.	REC %	Cu (ppm)	Co (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)
0.00	1.83	1.83		CSDH	casing										
1.83	4.00	2.17	T	OBDH	overburden										
4.00	17.05	13.05	S	PHBS	porphyritic basalt										
					-pervasive limonite	4.00	6.10	2.10	N114573	61	0.23%	21	252	3	
					-trace black wad	6.10	7.77	1.67	N114574	100	0.16%	29	360	<0.2	
						7.77	9.45	1.68	N114575	90	0.13%	32	362	<0.2	
						9.45	10.97	1.52	N114576	100	0.11%	33	370	<0.2	
						10.97	12.95	1.98	N114577	94	0.13%	37	484	<0.2	
						12.95	14.48	1.53	N114578	97	0.18%	54	802	<0.2	
						14.48	15.70	1.22	N114579	100	0.31%	57	996	<0.2	
						15.70	17.05	1.35	N114580	100	0.36%	84	1170	<0.2	
17.05	20.42	3.37	T	PHBS	porphyritic breccia basalt										
					-weak pyrite in matrix	17.05	18.90	1.85	N114581	100	0.19%	34	596	<0.2	
					-trace cuprite	18.90	20.42	1.52	N114582	100	0.15%	32	500	<0.2	
20.42	25.40	4.98	T	PHBS	porphyritic breccia basalt										
					-hematitic matrix	20.42	21.95	1.53	N114583	100	0.26%	43	950	<0.2	
					-weak cuprite	21.95	23.47	1.52	N114584	100	0.67%	70	1330	<0.2	
						23.47	25.40	1.93	N114585	93	0.74%	90	2540	<0.2	
25.40	29.75	4.35	T	PHBS	porphyritic basalt with stringers										
					-quartz-red hematite-pyrite-chalcopyrite stringers	25.40	26.52	1.12	N114586	100	0.45%	46	1255	<0.2	
					-weak cuprite	26.52	28.04	1.52	N114587	95	0.18%	57	1615	<0.2	
					-intensive hematite	28.04	29.75	1.71	N114588	100	0.26%	60	1465	<0.2	
29.75	33.95	4.20	T	PHBS	porphyritic basalt										
					-trace disseminated pyrite	29.75	31.09	1.34	N114589	100	282	50	746	<0.2	
					-trace cuprite	31.09	32.61	1.52	N114590	100	298	55	952	<0.2	
						32.61	33.95	1.34	N114591	100	512	77	1495	<0.2	
33.95	43.28	9.33	T	BRBS	aphanitic breccia basalt										
					-weak hematite	33.95	35.66	1.71	N114592	100	214	42	664	<0.2	
						35.66	37.19	1.53	N114593	94	600	60	606	<0.2	
					EOH										

*S-strong weathering, T-transitional weathering, F-fresh

093869 5/5

APPENDIX VI

CERTIFICATES OF ANALYSIS - DRILL CORE AND ROAD CUT SAMPLES

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 : ICE-ID97-34
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 30-OCT-97
Invoice No. : 19748846
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9748846

SAMPLE	PREP CODE	Cu %
N113455	244 --	0.65
N113461	244 --	0.37
N113462	244 --	0.51
N113463	244 --	0.97
N113464	244 --	0.13
N113465	244 --	0.25
N113466	244 --	0.65

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

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C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-52
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 27-OCT-97
Invoice No. : I9748151
P.O. Number : NONE
Account : MPO

CERTIFICATE OF ANALYSIS A9748151

SAMPLE	PREP CODE		Cu %
N113756	244	--	0.28
N113757	244	--	0.39
N113758	244	--	0.41
N113759	244	--	0.37
N113760	244	--	0.60
N113761	244	--	0.36

CERTIFICATION: Scott Laing

Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-ID97-36
Comments:

Certificate Date: 29-OCT-97
Invoice No. : 19748061
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9748061

SAMPLE	PREP CODE		Cu %
N113890	244	--	0.33

CERTIFICATION: Said Ahmad

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British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : ICE
Comments:

Page Number :1
Total Pages :1
Certificate Date: 29-OCT-97
Invoice No. : I9747903
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747903

SAMPLE	PREP CODE	Cu %
BB27712	244 --	0.54
BB27713	244 --	0.64
BB27714	244 --	1.06

CERTIFICATION:

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British Columbia, Canada V7J 2C1
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To: EXPATRIATE RESOURCES LTD.
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Y1A 3S9

Project : ICE
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 20-OCT-97
Invoice No. : 19747272
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9747272

SAMPLE	PREP CODE		Au ppb FA+AA	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
BB27712	244	229	115	1.2	3.10	8	210	< 0.5	< 2	0.37	1.5	40	125	4740	10.85	10	< 1	0.06	< 10	0.60	405
BB27713	244	229	85	0.6	3.16	4	130	< 0.5	< 2	0.32	2.0	41	171	5690	>15.00	10	< 1	0.04	< 10	0.43	260
BB27714	244	229	45	0.2	3.88	10	100	0.5	< 2	0.36	3.0	77	123	9980	>15.00	< 10	< 1	0.02	< 10	0.49	305
BB27715	244	229	20	< 0.2	3.27	14	90	< 0.5	Intf*	0.54	4.5	86	101	>10000	>15.00	< 10	< 1	0.02	< 10	0.71	435
BB27716	244	229	10	< 0.2	2.97	10	60	< 0.5	Intf*	0.41	3.5	57	96	>10000	11.60	< 10	< 1	0.02	< 10	0.90	350
BB27717	244	229	10	< 0.2	4.00	< 2	60	< 0.5	Intf*	0.48	4.5	42	124	>10000	14.45	10	3	0.01	< 10	1.00	370

CERTIFICATION: David Bradley

*INTERFERENCE: HIGH Cu on Bi and P

Chemex Labs Ltd.

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

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Y1A 3S9

Project : ICE
Comments:

Page ber : 1-B
Total ages : 1
Certificate Date: 20-OCT-97
Invoice No. : 19747272
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9747272

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
BB27712	244	229	1	< 0.01	29	830	10	< 2	23	18	0.05	< 10	< 10	145	< 10	516
BB27713	244	229	< 1	0.01	21	850	8	< 2	23	12	0.05	< 10	< 10	213	< 10	826
BB27714	244	229	< 1	< 0.01	38	1270	2	< 2	39	11	0.04	< 10	10	222	< 10	1315
BB27715	244	229	< 1	< 0.01	36	Intf*	10	< 2	33	8	0.03	< 10	< 10	171	< 10	1285
BB27716	244	229	< 1	< 0.01	25	Intf*	18	< 2	32	4	0.04	< 10	10	184	< 10	1160
BB27717	244	229	< 1	< 0.01	24	Intf*	12	< 2	43	5	0.05	< 10	10	287	< 10	1285

CERTIFICATION:

*INTERFERENCE: HIGH Cu on Bi and P

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British Columbia, Canada V7J 2C1
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o: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE CHIPS
Comments:

Certificate Date: 21-OCT-97
Invoice No. :19747180
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747180

SAMPLE	PREP CODE		Cu %
N114144	244	--	0.22
N114145	244	--	0.12
N114146	244	--	0.34
N114147	244	--	0.41
N114150	244	--	0.14
N114501	244	--	0.13
N114502	244	--	0.13
N114503	244	--	0.21
N114504	244	--	0.17
N114505	244	--	0.27

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-ID97-36
Comments:

Page .ber : 1
Total Pages : 1
Certificate Date: 20-OCT-97
Invoice No. : 19747179
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747179

SAMPLE	PREP CODE	Cu %
N114064	244 --	0.88
N114065	244 --	0.76
N114066	244 --	0.36

CERTIFICATION:

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To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-85
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :I9747178
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747178

SAMPLE	PREP CODE	Cu %
N114573	244 --	0.23
N114574	244 --	0.16
N114575	244 --	0.13
N114576	244 --	0.11
N114577	244 --	0.13
N114578	244 --	0.18
N114579	244 --	0.31
N114580	244 --	0.36
N114581	244 --	0.19
N114582	244 --	0.15
N114583	244 --	0.26
N114584	244 --	0.67
N114585	244 --	0.74
N114586	244 --	0.45
N114587	244 --	0.18
N114588	244 --	0.26

CERTIFICATION:

Chemex Labs Ltd.

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-74
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 25-OCT-97
Invoice No. : I9747136
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747136

SAMPLE	PREP CODE	Cu %
N114562	244 --	0.21
N114563	244 --	0.19
N114564	244 --	0.32
N114565	244 --	0.21
N114566	244 --	0.21
N114567	244 --	0.52

CERTIFICATION:

Chemex Labs Ltd.

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

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Project : ICE-IC97-79
Comments:

Page ber :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. : I9747135
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747135

SAMPLE	PREP CODE	Cu %
N114377	244 --	0.20
N114378	244 --	0.26
N114379	244 --	0.19
N114380	244 --	0.23
N114381	244 --	0.30
N114385	244 --	0.15
N114386	244 --	0.23
N114387	244 --	0.36
N114388	244 --	0.32
N114389	244 --	0.10
N114390	244 --	0.22
N114391	244 --	0.36
N114392	244 --	0.19
N114393	244 --	0.10
N114394	244 --	0.29
N114395	244 --	0.39
N114396	244 --	0.18
N114397	244 --	0.46
N114398	244 --	0.21
N114399	244 --	0.24

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Project : ICE-IC97-83
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : I9747134
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747134

SAMPLE	PREP CODE	Cu %
N114492	244 --	0.20
N114494	244 --	0.13
N114495	244 --	0.18

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Project : ICE-IC97-81
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :19747133
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747133

SAMPLE	PREP CODE	Cu %
N114441	244 --	0.54
N114553	244 --	0.37

CERTIFICATION: Sarah Leung

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Project : ICE-IC97-82
Comments:

Page .ber : 1
Total Pages : 1
Certificate Date: 25-OCT-97
Invoice No. : I9747132
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747132

SAMPLE	PREP CODE	Cu %
N114451	244 --	0.31
N114452	244 --	0.37
N114453	244 --	0.48
N114454	244 --	0.17
N114455	244 --	0.16
N114458	244 --	0.28
N114459	244 --	0.40
N114460	244 --	0.53
N114461	244 --	0.52
N114462	244 --	0.54
N114464	244 --	0.37
N114466	244 --	0.88
N114467	244 --	0.65
N114468	244 --	0.71
N114471	244 --	0.25

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Project : ICE-IC97-81
Comments:

Page ber :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. : I9747131
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747131

SAMPLE	PREP CODE		Cu %
N114419	244	--	0.36
N114420	244	--	0.33
N114421	244	--	0.46
N114424	244	--	0.25
N114425	244	--	0.10
N114426	244	--	0.12
N114427	244	--	0.17
N114428	244	--	0.17
N114429	244	--	0.26
N114430	244	--	0.35

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Project : ICE-IC97-80
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 25-OCT-97
Invoice No. : I9747130
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747130

SAMPLE	PREP CODE	Cu %
N114405	244 --	0.12
N114406	244 --	0.19

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Project : ICE-IC97-78
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : 19747129
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747129

SAMPLE	PREP CODE	Cu %
N114356	244 --	0.31
N114357	244 --	0.26
N114358	244 --	0.16
N114359	244 --	0.62
N114360	244 --	0.34
N114362	244 --	0.52
N114363	244 --	0.44
N114364	244 --	0.40
N114365	244 --	0.97
N114367	244 --	0.25

CERTIFICATION: Said Cathro

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Project : ICE-IC97-77
Comments:

Page Number :1
Total Pages :1
Certificate Date: 21-OCT-97
Invoice No. :19747128
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747128

SAMPLE	PREP CODE		Cu %
N114341	244	--	0.48
N114342	244	--	1.06
N114346	244	--	0.66
N114348	244	--	0.54
N114349	244	--	0.26
N114350	244	--	0.19
N114401	244	--	0.10
N114402	244	--	0.27
N114403	244	--	0.20

CERTIFICATION: Sarah Leingo

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Project : ICE-IC97-76
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :I9747127
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747127

SAMPLE	PREP CODE	Cu %
N114296	244 --	0.46
N114297	244 --	0.67
N114298	244 --	0.53
N114299	244 --	0.14
N114352	244 --	0.32
N114353	244 --	0.24
N114354	244 --	0.26

CERTIFICATION: Sara Celma

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Project : ICE-IC97-74
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :19747126
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747126

SAMPLE	PREP CODE	Cu %
N114329	244 --	0.24
N114330	244 --	0.24
N114331	244 --	0.28
N114332	244 --	0.19
N114333	244 --	0.24
N114334	244 --	0.32
N114335	244 --	0.23
N114336	244 --	0.37
N114337	244 --	0.24

CERTIFICATION: Said Ismail

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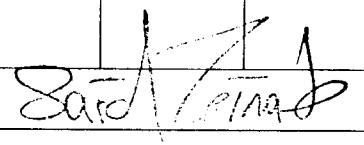
Project : ICE-IC97-75
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : I9747125
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747125

SAMPLE	PREP CODE		Cu %
N114315	244	--	0.45
N114316	244	--	0.47
N114317	244	--	0.51
N114318	244	--	0.39
N114319	244	--	0.29
N114320	244	--	0.24
N114321	244	--	0.25
N114322	244	--	0.25
N114323	244	--	0.41
N114324	244	--	0.24
N114325	244	--	0.59
N114326	244	--	0.06
N114327	244	--	0.09
N114328	244	--	0.64
N114594	244	--	0.28

CERTIFICATION: 

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Project : ICE-IC97-73
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : 19747124
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747124

SAMPLE	PREP CODE		Cu %
N114284	244	--	0.24
N114285	244	--	0.38
N114286	244	--	0.28

CERTIFICATION: Sara Leonard

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Project : ICE-ICE97-72
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : 19747123
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747123

SAMPLE	PREP CODE		Cu %
N114276	244	--	0.39
N114277	244	--	0.48
N114279	244	--	0.21
N114280	244	--	0.18
N114281	244	--	0.28

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Project : ICE-IC97-71
Comments:

Page Number :1
Total Pages :1
Certificate Date: 21-OCT-97
Invoice No. :I9747122
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747122

SAMPLE	PREP CODE	Cu %
N114309	244 --	0.29
N114310	244 --	0.30

CERTIFICATION: Sarah Cathro

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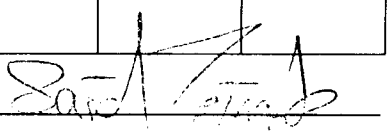
Project : ICE-IC97-70
Comments:

Certificate Date: 25-OCT-97
Invoice No. : I9747121
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747121

SAMPLE	PREP CODE	Cu %
N114262	244 --	0.39
N114263	244 --	0.04
N114264	244 --	0.42

CERTIFICATION: 

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Project : ICE-IC97-69
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 25-OCT-97
Invoice No. : 19747120
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747120

SAMPLE	PREP CODE		Cu %									
N114191	244	--	0.26									
N114192	244	--	0.25									
N114193	244	--	0.23									
N114194	244	--	0.33									
N114195	244	--	0.36									
N114196	244	--	0.40									
N114197	244	--	0.55									
N114198	244	--	0.47									
N114200	244	--	0.40									
N114301	244	--	0.41									
N114302	244	--	0.36									
N114307	244	--	0.25									
N114308	244	--	0.26									

CERTIFICATION: Said Leinad

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Project : ICE-IC97-68
Comments:

Page Number :1
Total Pages :1
Certificate Date: 21-OCT-97
Invoice No. :19747119
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747119

SAMPLE	PREP CODE		Cu %
N114185	244	--	0.18
N114186	244	--	0.14
N114187	244	--	0.13
N114188	244	--	0.24

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Project : ICE-IC97-67
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 21-OCT-97
Invoice No. : 19747118
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747118

SAMPLE	PREP CODE	Cu %
N114249	244 --	0.14
N114250	244 --	0.27
N114251	244 --	0.14

CERTIFICATION: Sara Leonard

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Project : ICE-IC97-65
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :19747117
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747117

SAMPLE	PREP CODE		Cu %
N114174	244	--	0.14
N114175	244	--	0.24
N114176	244	--	0.22

CERTIFICATION: Said Ceinos

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Project : ICE-IC97-62
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 25-OCT-97
Invoice No. : I9747116
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747116

SAMPLE	PREP CODE		Cu %
N114213	244	--	0.25
N114214	244	--	0.10
N114215	244	--	0.24
N114216	244	--	0.15
N114217	244	--	0.33
N114218	244	--	0.34
N114219	244	--	0.55
N114224	244	--	0.56
N114225	244	--	0.39

CERTIFICATION: Saeed Ghaffari

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Project : ICE CHIPS
Comments:

Certificate Date: 25-OCT-97
Invoice No. : I9747115
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747115

SAMPLE	PREP CODE	Cu %
N112723	244 --	0.52
N112724	244 --	0.31
N112725	244 --	0.22
N112726	244 --	0.15
N112727	244 --	0.26
N112728	244 --	0.43
N112729	244 --	0.20
N112730	244 --	0.36
N112731	244 --	0.30
N112732	244 --	0.45
N112733	244 --	0.26
N112734	244 --	0.24
N112735	244 --	0.09
N112736	244 --	0.25
N112737	244 --	0.22
N112738	244 --	0.43
N112741	244 --	1.01
N112743	244 --	0.09
N112744	244 --	0.22
N112745	244 --	0.25
N112746	244 --	0.19
N112747	244 --	0.19
N112748	244 --	0.17
N112749	244 --	0.13
N112750	244 --	0.16

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Project : ICE-IC97-66
Comments:

Certificate Date: 21-OCT-97
Invoice No. : I9747114
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9747114

SAMPLE	PREP CODE	Cu %
N114179	244 --	0.34
N114180	244 --	0.26
N114181	244 --	0.45
N114182	244 --	0.76

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Project : ICE-IC97-64
Comments:

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Total Pages :1
Certificate Date: 21-OCT-97
Invoice No. :I9747113
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747113

SAMPLE	PREP CODE		Cu %
N114163	244	--	0.76

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Project : ICE-IC97-63
Comments:

Page Number :1
Total Pages :1
Certificate Date: 25-OCT-97
Invoice No. :19747112
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747112

SAMPLE	PREP CODE	Cu %
N114095	244 --	0.32
N114096	244 --	0.22
N114097	244 --	0.27
N114098	244 --	1.00
N114099	244 --	0.55
N114100	244 --	0.73
N114166	244 --	0.97
N114167	244 --	0.55
N114168	244 --	0.60
N114169	244 --	0.62

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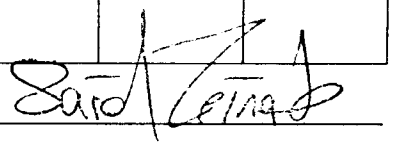
Project : ICE-IC97-60
Comments:

Certificate Date: 25-OCT-97
Invoice No. : 19747111
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9747111

SAMPLE	PREP CODE	Cu %
N114005	244 --	0.30
N114006	244 --	0.22
N114007	244 --	0.39
N114008	244 --	0.33
N114009	244 --	0.38
N114010	244 --	0.24
N114011	244 --	0.55
N114012	244 --	0.41
N114013	244 --	0.43
N114014	244 --	0.32
N114015	244 --	0.36
N114016	244 --	0.17
N114017	244 --	0.35
N114018	244 --	0.13
N114019	244 --	0.25
N114020	244 --	0.21
N114021	244 --	0.26
N114022	244 --	0.41
N114023	244 --	0.29
N114024	244 --	0.50
N114025	244 --	0.27
N114026	244 --	0.13
N114027	244 --	0.29
N114028	244 --	0.42
N114029	244 --	0.32
N114030	244 --	0.30
N114036	244 --	0.54
N114037	244 --	0.99

CERTIFICATION: 

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Analytical Chemists * Geochemists * Registered Assayers
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PHONE: 604-984-0221 FAX: 604-984-0218

To: EXPATRIATE RESOURCES LTD.
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Y1A 3S9

Project : ICE
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 15-OCT-97
Invoice No. : 19746801
P.O. Number :
Account : MPO

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9746801

SAMPLE	PREP CODE	Cu %
BB27715	244 --	4.40
BB27716	244 --	11.20
BB27717	244 --	8.32

CERTIFICATION: Sara Verna

* PROJECT CHANGE FROM POWER PLAY TO ICE.

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Project : ICE CHIPS
Comments:

Page er :1
Total Pages :1
Certificate Date: 15-OCT-97
Invoice No. :19746800
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9746800

SAMPLE	PREP CODE	Cu %
N114148	244 --	1.86
N114149	244 --	3.79

CERTIFICATION: Said Zeinab

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Y1A 3S9

Project : ICE CHIPS
Comments:

Certificate Date: 14-OCT-97
Invoice No. : I9746715
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746715

SAMPLE	PREP CODE		Cu %
N112739	244	--	1.67
N112740	244	--	2.22
N112742	244	--	1.51

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Project : ICE-IC97-81
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : 19746714
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746714

SAMPLE	PREP CODE	Cu %
N114418	244 --	1.40
N114422	244 --	1.56
N114423	244 --	1.77

CERTIFICATION: Said Ertnad

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Project : ICE-IC97-73
Comments:

Page ...er : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : 19746713
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746713

SAMPLE	PREP CODE		Zn %									
N114287	244	--	1.42									

CERTIFICATION: Saro Lemay

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Project : ICE-IC97-73
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 19-OCT-97
Invoice No. : 19746712
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746712

SAMPLE	PREP CODE		Ag FA g/t									
N114286	244	--	113									

CERTIFICATION: _____

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Project : ICE-IC97-77
Comments:

Certificate Date: 14-OCT-97
Invoice No. : 19746711
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746711

SAMPLE	PREP CODE		Cu %
N114347	244	--	1.16

CERTIFICATION: Said Demirdjian

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Project : ICE-ID97-36
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : 19746591
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746591

SAMPLE	PREP CODE		Cu %
N114063	244	--	1.41

CERTIFICATION: Said Celina

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Project : ICE-IC97-60
Comments:

Page Number :1
Total Pages :1
Certificate Date: 14-OCT-97
Invoice No. : I9746590
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9746590

SAMPLE	PREP CODE	Cu %
N114035	244 --	1.42

CERTIFICATION: Saad Leung-D

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Project : ICE-IC97-82
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : 19746589
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746589

SAMPLE	PREP CODE		Cu %
N114456	244	--	1.47
N114457	244	--	1.15
N114463	244	--	1.26
N114465	244	--	1.66
N114469	244	--	4.55
N114470	244	--	3.37

CERTIFICATION: Said Ahmad

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Project : ICE-IC97-82
Comments:

Page er :1
Total Pages :1
Certificate Date: 14-OCT-97
Invoice No. :I9746588
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9746588

SAMPLE	PREP CODE	Cu %
N114160	244 --	1.54
N114161	244 --	1.09
N114162	244 --	1.68

CERTIFICATION: Said Leinad

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Project : ICE-ICE97-72
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : I9746587
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746587

SAMPLE	PREP CODE		Cu %									
N114278	244	--	1.79									

CERTIFICATION: David Chiang

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Project : ICE-IC97-83
Comments:

Page er : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : I9746586
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746586

SAMPLE	PREP CODE		Cu %									
N114493	244	--	1.74									

CERTIFICATION: Barb Ellard

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Project : ICE-IC97-84
Comments:

Page Number :1
Total Pages :1
Certificate Date: 14-OCT-97
Invoice No. :19746585
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9746585

SAMPLE	PREP CODE		Cu %									
N114442	244	--	2.57									

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Project : ICE-IC97-69
Comments:

Page Number :1
Total Pages :1
Certificate Date. 14-OCT-97
Invoice No. :19746584
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9746584

SAMPLE	PREP CODE	Cu %
N114199	244 --	1.20
N114303	244 --	1.18
N114304	244 --	1.71
N114305	244 --	2.83
N114306	244 --	1.35

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Project : ICE-IC97-78
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : I9746583
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9746583

SAMPLE	PREP CODE		Cu %
N114361	244	--	1.23
N114366	244	--	1.83

CERTIFICATION: Said Leigh

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Project : ICE-ID97-36
Comments:

Certificate Date: 15-OCT-97
Invoice No. : I9745974
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745974

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N113891	208	294	420	7.24	11.4	0.08	22	< 10	< 0.5	Intf*	0.11	0.5	1650	34	>10000	>15.00	< 10	1	< 0.01	< 10	0.08
N113892	208	294	940	8.32	26.8	0.02	12	< 10	< 0.5	Intf*	0.38	5.5	1305	24	>10000	>15.00	< 10	3	< 0.01	< 10	0.06
N113893	208	294	715	9.92	27.0	0.01	10	< 10	< 0.5	Intf*	0.09	4.5	689	15	>10000	>15.00	< 10	3	< 0.01	< 10	0.01
N113894	208	294	795	4.43	22.4	0.02	< 2	< 10	< 0.5	Intf*	0.73	3.5	611	26	>10000	>15.00	< 10	3	< 0.01	< 10	0.27
N113895	208	294	910	3.73	24.2	< 0.01	20	< 10	< 0.5	Intf*	0.30	5.5	525	29	>10000	>15.00	< 10	5	< 0.01	< 10	0.13
N113896	208	294	735	3.93	15.4	0.03	18	< 10	< 0.5	Intf*	0.33	6.0	818	26	>10000	>15.00	< 10	4	< 0.01	< 10	0.14
N113897	208	294	755	2.68	13.2	0.01	10	< 10	< 0.5	Intf*	0.03	2.5	352	43	>10000	>15.00	< 10	4	< 0.01	< 10	0.01
N113898	208	294	650	4.05	10.0	0.01	20	< 10	< 0.5	Intf*	0.03	3.0	467	23	>10000	>15.00	< 10	4	< 0.01	< 10	0.01
N113899	208	294	430	3.54	7.2	0.01	6	< 10	< 0.5	Intf*	0.34	7.0	606	25	>10000	>15.00	< 10	4	< 0.01	< 10	0.17
N113900	208	294	675	4.23	13.2	< 0.01	24	< 10	< 0.5	Intf*	0.03	9.0	574	19	>10000	>15.00	< 10	6	< 0.01	< 10	< 0.01
N114054	208	294	570	3.44	8.6	< 0.01	8	< 10	< 0.5	Intf*	0.01	4.5	319	30	>10000	>15.00	< 10	3	< 0.01	< 10	< 0.01
N114055	208	294	700	3.01	6.6	< 0.01	8	< 10	< 0.5	Intf*	< 0.01	3.0	413	23	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01
N114056	208	294	795	4.12	17.2	< 0.01	14	< 10	< 0.5	Intf*	< 0.01	1.5	591	29	>10000	>15.00	< 10	3	< 0.01	< 10	< 0.01
N114057	208	294	740	3.84	17.2	0.01	22	< 10	< 0.5	Intf*	0.02	3.0	544	28	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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Project : ICE-ID97-36
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 15-OCT-97
Invoice No. : I9745974
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745974

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113891	208	294	55	50	< 0.01	4	Intf*	22	2	< 1	1	< 0.01	< 10	20	30	< 10	238
N113892	208	294	40	35	< 0.01	8	Intf*	6	4	< 1	3	< 0.01	< 10	20	5	< 10	688
N113893	208	294	20	25	< 0.01	4	Intf*	2	2	< 1	1	< 0.01	< 10	10	1	< 10	502
N113894	208	294	75	14	< 0.01	6	Intf*	30	2	< 1	4	< 0.01	< 10	20	22	< 10	784
N113895	208	294	50	13	< 0.01	9	Intf*	32	6	< 1	1	< 0.01	< 10	20	4	< 10	1640
N113896	208	294	130	18	< 0.01	6	Intf*	30	2	< 1	1	< 0.01	< 10	20	< 1	< 10	2810
N113897	208	294	65	8	< 0.01	6	Intf*	54	< 2	< 1	1	< 0.01	< 10	20	< 1	< 10	1410
N113898	208	294	55	20	< 0.01	4	Intf*	30	2	< 1	1	< 0.01	< 10	10	< 1	< 10	1710
N113899	208	294	85	16	< 0.01	5	Intf*	44	2	< 1	3	< 0.01	< 10	20	< 1	< 10	3020
N113900	208	294	75	11	< 0.01	3	Intf*	36	2	< 1	1	< 0.01	< 10	10	< 1	< 10	3930
N114054	208	294	45	12	< 0.01	3	Intf*	40	2	< 1	< 1	< 0.01	< 10	10	< 1	< 10	1715
N114055	208	294	35	9	< 0.01	4	Intf*	40	2	< 1	< 1	< 0.01	< 10	20	< 1	< 10	1770
N114056	208	294	30	19	< 0.01	4	Intf*	30	< 2	< 1	< 1	< 0.01	< 10	10	< 1	< 10	1010
N114057	208	294	40	22	< 0.01	4	Intf*	34	2	< 1	1	< 0.01	< 10	10	< 1	< 10	1305

CERTIFICATION: [signature]

*INTERFERENCE: Cu ON Bi AND P.

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Project : ICE-ID97-36
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 11-OCT-97
Invoice No. : I9745971
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745971

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
N113885	205 294	0.6	1.32	< 2	180	< 0.5	< 2	4.35	0.5	9	98	440	6.00	< 10	< 1	0.09	4	0.48	679	< 1
N113886	205 294	< 0.2	1.66	< 2	2110	< 0.5	< 2	4.17	< 0.5	13	86	86	8.54	10	< 1	0.16	< 10	1.29	1575	< 1
N113887	205 294	< 0.2	0.89	< 2	100	< 0.5	< 2	6.24	0.5	8	54	17	2.39	< 10	< 1	0.13	< 10	0.32	770	< 1
N113888	205 294	< 0.2	3.45	< 2	130	< 0.5	< 2	3.70	1.5	33	68	87	6.19	10	< 1	< 0.01	< 10	2.81	1200	< 1
N113889	205 294	< 0.2	3.74	< 2	770	< 0.5	< 2	3.20	1.5	40	91	91	7.47	10	< 1	< 0.01	< 10	2.77	1200	< 1
N113890	205 294	0.4	0.19	8	40	< 0.5	< 2	1.06	10.5	73	86	3050	10.40	< 10	< 1	< 0.01	< 10	0.57	595	3
N114058	205 294	< 0.2	3.73	< 2	90	< 0.5	< 2	2.97	1.0	21	132	197	5.42	10	< 1	0.04	< 10	2.41	660	< 1
N114059	205 294	< 0.2	3.91	< 2	110	< 0.5	< 2	2.81	0.5	25	143	142	5.32	10	< 1	0.10	< 10	2.57	795	< 1
N114060	205 294	< 0.2	4.84	< 2	100	< 0.5	< 2	3.49	1.0	31	189	135	5.49	10	< 1	0.04	< 10	3.11	975	< 1
N114061	205 294	< 0.2	3.88	< 2	420	< 0.5	< 2	3.20	1.0	23	136	87	4.86	10	< 1	0.09	< 10	2.96	810	< 1
N114062	205 294	< 0.2	4.05	< 2	80	< 0.5	< 2	3.81	1.0	23	115	81	5.21	10	< 1	0.05	< 10	2.68	835	< 1
N114063	205 294	4.8	0.97	< 2	< 10	< 0.5	Intf*	0.51	9.0	472	56	>10000	>15.00	10	< 1	0.01	< 10	0.65	215	14
N114064	205 294	3.4	1.00	< 2	< 10	< 0.5	< 2	0.12	6.0	434	48	8540	>15.00	10	< 1	< 0.01	< 10	0.59	75	15
N114065	205 294	2.6	0.78	6	10	< 0.5	< 2	0.06	3.0	208	46	7210	>15.00	10	< 1	< 0.01	< 10	0.45	70	17
N114066	205 294	2.0	1.18	2	10	< 0.5	< 2	0.01	3.5	180	47	3350	>15.00	10	< 1	< 0.01	< 10	0.71	75	12
N114067	205 294	0.2	1.34	< 2	10	< 0.5	< 2	0.01	< 0.5	148	45	63	>15.00	10	< 1	< 0.01	< 10	0.78	70	8
N114068	205 294	1.0	1.04	< 2	< 10	< 0.5	< 2	0.02	1.0	184	35	1505	>15.00	20	< 1	< 0.01	< 10	0.63	65	9
N114069	205 294	0.6	0.99	< 2	10	< 0.5	< 2	< 0.01	< 0.5	93	37	84	>15.00	10	< 1	< 0.01	< 10	0.58	55	8
N114070	205 294	0.6	0.92	2	< 10	< 0.5	< 2	0.12	< 0.5	118	65	60	>15.00	10	< 1	< 0.01	< 10	0.61	55	3
N114071	205 294	< 0.2	1.03	6	10	< 0.5	< 2	0.07	0.5	78	52	134	>15.00	10	< 1	< 0.01	< 10	0.66	55	6
N114072	205 294	0.2	1.48	< 2	< 10	< 0.5	< 2	0.39	0.5	78	80	197	12.10	10	< 1	< 0.01	< 10	1.06	70	3
N114073	205 294	< 0.2	1.79	< 2	10	< 0.5	< 2	0.30	1.5	101	80	215	12.95	< 10	< 1	< 0.01	< 10	1.23	90	1
N114074	205 294	< 0.2	1.07	< 2	< 10	< 0.5	< 2	0.36	< 0.5	70	60	104	14.70	10	< 1	< 0.01	< 10	0.77	55	1
N114075	205 294	< 0.2	1.30	< 2	10	< 0.5	< 2	0.49	< 0.5	61	64	125	>15.00	10	< 1	< 0.01	< 10	0.90	65	3
N114076	205 294	< 0.2	1.44	< 2	10	< 0.5	< 2	0.65	< 0.5	79	73	148	>15.00	< 10	< 1	< 0.01	< 10	0.98	75	3
N114077	205 294	< 0.2	0.85	< 2	< 10	< 0.5	< 2	0.29	0.5	67	52	127	>15.00	10	< 1	< 0.01	< 10	0.58	45	6
N114078	205 294	0.2	1.15	< 2	10	< 0.5	< 2	0.35	< 0.5	67	66	69	>15.00	10	< 1	< 0.01	< 10	0.80	65	7
N114079	205 294	0.6	1.99	< 2	< 10	< 0.5	< 2	0.93	1.5	104	75	159	>15.00	10	< 1	< 0.01	< 10	1.34	95	2
N114080	205 294	< 0.2	2.93	< 2	10	< 0.5	< 2	0.40	< 0.5	58	89	138	13.25	10	< 1	< 0.01	< 10	2.21	130	< 1
N114081	205 294	0.4	3.06	< 2	10	< 0.5	< 2	0.82	0.5	63	93	3960	11.90	10	< 1	< 0.01	< 10	2.49	165	< 1
N114082	205 294	< 0.2	4.98	< 2	30	< 0.5	< 2	0.80	1.0	45	118	114	10.40	20	< 1	< 0.01	< 10	4.57	480	< 1
N114083	205 294	1.0	2.80	< 2	< 10	< 0.5	< 2	0.19	< 0.5	193	65	114	>15.00	10	< 1	< 0.01	< 10	2.04	135	< 1
N114084	205 294	4.4	2.47	< 2	10	< 0.5	< 2	0.73	0.5	113	63	146	14.45	10	< 1	< 0.01	< 10	1.90	125	< 1
N114085	205 294	4.2	2.17	4	< 10	< 0.5	< 2	0.27	1.5	185	62	89	>15.00	10	1	< 0.01	< 10	1.53	105	4
N114086	205 294	3.4	3.04	< 2	< 10	< 0.5	< 2	0.23	< 0.5	189	65	146	>15.00	10	1	< 0.01	< 10	2.08	140	3
N114087	205 294	0.8	4.24	< 2	10	< 0.5	< 2	0.50	< 0.5	139	87	669	14.20	10	< 1	0.01	< 10	3.04	285	1
N114088	205 294	0.8	5.27	< 2	10	< 0.5	< 2	0.65	3.0	116	108	235	13.30	20	< 1	< 0.01	< 10	4.17	425	< 1
N114089	205 294	0.6	5.21	< 2	30	< 0.5	< 2	1.23	1.5	147	102	886	14.00	20	< 1	< 0.01	< 10	3.51	645	< 1
N114090	205 294	< 0.2	3.64	< 2	150	< 0.5	< 2	3.94	1.0	32	163	100	6.10	10	< 1	< 0.01	< 10	2.76	970	< 1
N114091	205 294	< 0.2	2.88	< 2	40	< 0.5	< 2	2.47	1.5	31	45	71	5.52	10	< 1	0.01	< 10	2.16	820	< 1

CERTIFICATION: Ian Bradley

*INTERFERENCE: Cu ON Bi AND P.

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 : ICE-ID97-36
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 11-OCT-97
Invoice No. : 19745971
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745971

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
N113885	205	294	< 0.01	11	777	3	< 2	5	16	0.01	< 10	< 10	109	< 10	56
N113886	205	294	0.02	18	850	< 2	2	3	48	< 0.01	< 10	< 10	117	< 10	60
N113887	205	294	< 0.01	10	710	< 2	2	3	19	0.01	< 10	< 10	55	< 10	24
N113888	205	294	< 0.01	37	440	< 2	< 2	19	56	0.42	< 10	< 10	204	< 10	104
N113889	205	294	< 0.01	40	450	< 2	2	23	68	0.32	< 10	< 10	198	< 10	218
N113890	205	294	< 0.01	9	620	82	< 2	< 1	6	< 0.01	< 10	< 10	88	< 10	1535
N114058	205	294	0.01	39	260	< 2	< 2	9	33	0.21	< 10	< 10	131	< 10	208
N114059	205	294	0.01	44	220	< 2	< 2	12	32	0.25	< 10	< 10	136	< 10	156
N114060	205	294	< 0.01	58	220	< 2	< 2	15	27	0.26	< 10	< 10	153	< 10	126
N114061	205	294	0.01	48	210	< 2	< 2	12	33	0.22	< 10	< 10	132	< 10	90
N114062	205	294	0.01	48	220	< 2	< 2	11	37	0.23	< 10	< 10	137	< 10	98
N114063	205	294	< 0.01	13	Intf*	8	4	4	5	0.03	< 10	< 10	30	< 10	3370
N114064	205	294	< 0.01	11	< 10	16	2	3	< 1	0.01	< 10	< 10	25	< 10	1995
N114065	205	294	< 0.01	8	< 10	20	< 2	3	< 1	0.01	< 10	< 10	20	< 10	1145
N114066	205	294	< 0.01	9	< 10	16	< 2	3	< 1	0.03	< 10	< 10	27	< 10	1805
N114067	205	294	< 0.01	7	< 10	10	4	3	< 1	0.03	< 10	< 10	34	< 10	72
N114068	205	294	< 0.01	3	< 10	22	< 2	2	< 1	0.01	< 10	< 10	32	< 10	132
N114069	205	294	< 0.01	3	< 10	18	2	3	< 1	0.01	< 10	< 10	32	< 10	642
N114070	205	294	< 0.01	7	< 10	2	2	3	< 1	0.01	< 10	< 10	29	< 10	1125
N114071	205	294	< 0.01	7	< 10	16	< 2	3	< 1	< 0.01	< 10	< 10	37	< 10	60
N114072	205	294	< 0.01	14	10	2	2	5	< 1	< 0.01	< 10	< 10	37	< 10	496
N114073	205	294	< 0.01	16	20	< 2	4	6	1	< 0.01	< 10	< 10	48	< 10	990
N114074	205	294	< 0.01	10	30	2	< 2	3	< 1	< 0.01	< 10	< 10	33	< 10	322
N114075	205	294	< 0.01	11	< 10	6	6	4	1	0.01	< 10	< 10	35	< 10	206
N114076	205	294	< 0.01	12	< 10	4	< 2	5	3	0.01	< 10	< 10	41	< 10	190
N114077	205	294	< 0.01	6	< 10	2	< 2	2	< 1	0.01	< 10	< 10	28	< 10	130
N114078	205	294	< 0.01	10	< 10	10	2	4	1	0.01	< 10	< 10	40	< 10	64
N114079	205	294	< 0.01	15	< 10	2	< 2	6	3	0.01	< 10	< 10	58	< 10	144
N114080	205	294	< 0.01	20	< 10	< 2	< 2	9	1	0.05	< 10	< 10	79	< 10	32
N114081	205	294	< 0.01	20	< 10	< 2	< 2	10	3	0.08	< 10	< 10	91	< 10	30
N114082	205	294	< 0.01	35	210	2	< 2	18	8	0.26	< 10	< 10	198	< 10	348
N114083	205	294	< 0.01	16	< 10	8	< 2	9	1	0.05	< 10	< 10	91	< 10	532
N114084	205	294	< 0.01	17	10	40	4	8	4	0.03	< 10	< 10	79	< 10	1320
N114085	205	294	< 0.01	17	150	42	< 2	7	2	0.01	< 10	< 10	73	< 10	1670
N114086	205	294	< 0.01	20	50	40	< 2	9	2	0.01	< 10	< 10	94	< 10	488
N114087	205	294	< 0.01	28	110	10	< 2	13	7	< 0.01	< 10	< 10	147	< 10	298
N114088	205	294	< 0.01	34	190	10	< 2	17	12	< 0.01	< 10	< 10	171	< 10	1430
N114089	205	294	< 0.01	34	230	6	4	20	15	0.09	< 10	< 10	186	< 10	1015
N114090	205	294	0.02	58	260	< 2	< 2	19	70	0.24	< 10	< 10	184	< 10	100
N114091	205	294	< 0.01	32	500	< 2	< 2	10	64	0.49	< 10	< 10	173	< 10	112

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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 : ICE-IC97-81
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 12-OCT-97
Invoice No. : 19745970
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745970

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
N114414	205	294	0.2	2.95	< 2	530	< 0.5	< 2	1.52	2.5	37	56	741	5.35	10	< 1	< 0.01	< 10	2.59	735	< 1
N114415	205	294	< 0.2	3.15	2	340	< 0.5	< 2	1.70	2.5	39	31	574	4.92	10	< 1	0.06	< 10	2.58	805	< 1
N114416	205	294	< 0.2	3.04	< 2	220	< 0.5	< 2	1.45	2.5	37	54	907	5.51	10	< 1	0.08	< 10	2.59	750	< 1
N114417	205	294	0.4	3.65	< 2	340	< 0.5	< 2	1.04	3.0	29	135	937	7.06	10	< 1	< 0.01	< 10	3.08	670	< 1
N114418	205	294	1.8	2.69	16	10	< 0.5	Intf*	0.07	1.0	152	79	>10000	>15.00	10	1	0.13	< 10	0.99	125	8
N114419	205	294	0.2	4.91	2	30	< 0.5	< 2	0.17	0.5	61	110	3130	13.80	20	< 1	0.09	< 10	2.75	345	< 1
N114420	205	294	0.2	4.35	< 2	30	< 0.5	< 2	0.14	< 0.5	109	101	2980	>15.00	20	< 1	0.11	< 10	2.34	270	< 1
N114421	205	294	0.8	4.54	16	30	< 0.5	< 2	0.11	0.5	175	91	4410	>15.00	30	< 1	0.11	< 10	2.23	250	4
N114422	205	294	2.0	0.79	16	10	< 0.5	Intf*	0.04	1.5	429	61	>10000	>15.00	10	< 1	0.16	< 10	0.21	30	30
N114423	205	294	2.8	0.89	12	10	< 0.5	Intf*	0.04	1.5	442	65	>10000	>15.00	10	< 1	0.09	< 10	0.27	40	13
N114424	205	294	0.6	3.38	12	20	< 0.5	< 2	0.12	< 0.5	293	80	2340	>15.00	10	< 1	0.08	< 10	1.70	235	< 1
N114425	205	294	0.2	4.31	2	130	< 0.5	< 2	1.23	4.5	42	112	899	7.89	20	< 1	0.01	< 10	3.60	555	< 1
N114426	205	294	< 0.2	4.71	< 2	290	< 0.5	< 2	1.16	6.0	28	114	1160	8.36	20	< 1	< 0.01	< 10	3.91	715	1
N114427	205	294	< 0.2	4.45	4	250	< 0.5	< 2	0.59	2.5	26	106	1470	9.47	10	< 1	< 0.01	< 10	3.74	810	< 1
N114428	205	294	< 0.2	4.91	2	130	< 0.5	< 2	0.52	3.5	29	111	1625	10.15	20	2	< 0.01	< 10	4.11	960	< 1
N114429	205	294	1.4	4.73	< 2	90	< 0.5	< 2	0.45	3.5	30	103	2450	10.60	20	< 1	< 0.01	< 10	3.72	870	< 1
N114430	205	294	0.6	4.75	2	40	< 0.5	< 2	0.34	3.5	101	103	3470	13.20	20	< 1	< 0.01	< 10	3.21	765	< 1
N114431	205	294	< 0.2	3.74	< 2	150	< 0.5	< 2	1.41	4.0	54	66	907	6.87	10	< 1	0.06	< 10	3.20	805	< 1
N114432	205	294	< 0.2	3.23	< 2	50	< 0.5	< 2	2.12	2.5	51	45	188	5.00	10	1	0.10	< 10	2.80	840	< 1
N114433	205	294	< 0.2	3.13	6	60	< 0.5	< 2	2.46	1.5	39	52	155	5.18	10	< 1	0.02	< 10	2.40	730	< 1

CERTIFICATION: Ian Pinchbeck

* INTERFERENCES: Cu on Bi and P

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 : ICE-IC97-81
Comments:

Page Number :1-B
Total Pages :1
Certificate Date: 12-OCT-97
Invoice No. :19745970
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745970

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
N114414	205	294	< 0.01	35	410	< 2	< 2	8	15	0.50	< 10	< 10	207	< 10	360
N114415	205	294	< 0.01	38	380	< 2	< 2	8	13	0.46	< 10	< 10	198	< 10	450
N114416	205	294	< 0.01	36	410	< 2	< 2	12	16	0.48	< 10	< 10	215	< 10	500
N114417	205	294	< 0.01	46	320	< 2	< 2	16	37	0.38	< 10	< 10	197	< 10	680
N114418	205	294	< 0.01	23	Intf*	16	< 2	10	2	0.08	< 10	< 10	120	< 10	288
N114419	205	294	< 0.01	38	50	< 2	< 2	20	4	0.14	< 10	< 10	179	< 10	432
N114420	205	294	< 0.01	34	10	2	< 2	16	3	0.06	< 10	< 10	162	< 10	416
N114421	205	294	< 0.01	34	< 10	< 2	< 2	15	3	0.02	< 10	< 10	161	< 10	444
N114422	205	294	< 0.01	9	Intf*	2	< 2	3	1	< 0.01	< 10	< 10	39	< 10	220
N114423	205	294	< 0.01	11	Intf*	< 2	< 2	4	1	0.02	< 10	< 10	40	< 10	280
N114424	205	294	< 0.01	28	30	< 2	< 2	12	3	0.03	< 10	< 10	127	< 10	334
N114425	205	294	< 0.01	38	250	< 2	< 2	23	7	0.37	< 10	< 10	212	< 10	510
N114426	205	294	< 0.01	38	240	< 2	< 2	23	62	0.29	< 10	< 10	187	< 10	1080
N114427	205	294	< 0.01	33	210	< 2	< 2	20	7	0.31	< 10	< 10	194	< 10	936
N114428	205	294	< 0.01	41	240	< 2	< 2	21	6	0.29	< 10	< 10	206	< 10	1170
N114429	205	294	< 0.01	47	280	< 2	< 2	21	8	0.28	< 10	< 10	235	< 10	1510
N114430	205	294	< 0.01	39	240	< 2	< 2	20	5	0.25	< 10	< 10	210	< 10	1480
N114431	205	294	< 0.01	41	310	< 2	< 2	14	13	0.41	< 10	< 10	170	< 10	922
N114432	205	294	< 0.01	35	340	< 2	< 2	11	14	0.39	< 10	< 10	151	< 10	424
N114433	205	294	0.01	35	370	< 2	< 2	8	13	0.39	< 10	< 10	150	< 10	210

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* INTERFERENCES: Cu on Bi and P

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

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

Project : ICE-IC97-60
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 12-OCT-97
Invoice No. : 19745969
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745969

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
N114005	205	294	< 0.2	3.75	< 2	250	< 0.5	< 2	1.47	3.5	40	90	2570	9.90	10	< 1	0.01	< 10	1.89	580	< 1
N114006	205	294	< 0.2	3.06	< 2	120	< 0.5	< 2	1.70	3.5	37	73	1915	8.46	10	< 1	< 0.01	< 10	2.04	600	< 1
N114007	205	294	< 0.2	2.87	< 2	60	< 0.5	< 2	1.48	3.0	33	73	3680	8.28	10	< 1	< 0.01	< 10	2.24	610	< 1
N114008	205	294	< 0.2	4.07	< 2	70	< 0.5	< 2	1.50	2.5	42	76	3900	8.23	10	< 1	< 0.01	< 10	3.18	875	1
N114009	205	294	< 0.2	4.61	< 2	360	< 0.5	< 2	1.37	3.0	42	85	3690	8.86	20	< 1	< 0.01	< 10	3.45	910	< 1
N114010	205	294	< 0.2	3.66	< 2	70	< 0.5	< 2	1.59	3.5	46	75	2310	8.68	10	< 1	< 0.01	< 10	2.87	725	< 1
N114011	205	294	< 0.2	3.66	< 2	400	< 0.5	< 2	1.40	2.5	53	90	5340	9.47	10	< 1	< 0.01	< 10	2.47	660	< 1
N114012	205	294	0.8	4.25	< 2	740	< 0.5	< 2	0.47	1.0	37	82	3930	12.05	10	< 1	0.05	< 10	2.11	400	1
N114013	205	294	0.8	3.41	< 2	160	< 0.5	< 2	0.47	0.5	29	67	3970	13.90	10	< 1	0.03	< 10	1.39	175	2
N114014	205	294	2.2	4.97	< 2	290	< 0.5	< 2	0.46	0.5	37	168	3020	11.95	10	< 1	0.04	< 10	1.99	250	1
N114015	205	294	3.6	4.13	2	70	< 0.5	< 2	0.26	< 0.5	50	144	3340	>15.00	10	< 1	0.07	< 10	1.57	215	3
N114016	205	294	< 0.2	3.77	< 2	140	< 0.5	< 2	0.73	1.5	42	179	1645	12.55	10	< 1	< 0.01	< 10	2.40	450	< 1
N114017	205	294	< 0.2	3.70	< 2	1430	< 0.5	< 2	0.91	2.0	32	162	3370	10.30	10	< 1	< 0.01	< 10	2.59	505	< 1
N114018	205	294	0.2	4.21	< 2	1270	< 0.5	< 2	0.86	1.5	30	169	1280	10.50	10	< 1	< 0.01	< 10	2.99	695	< 1
N114019	205	294	< 0.2	3.99	< 2	710	< 0.5	< 2	0.70	1.5	35	172	2730	10.70	10	< 1	< 0.01	< 10	2.93	745	< 1
N114020	205	294	0.2	3.83	< 2	330	< 0.5	< 2	0.57	1.5	37	172	1945	11.05	10	< 1	< 0.01	< 10	2.83	685	< 1
N114021	205	294	< 0.2	3.88	< 2	230	< 0.5	< 2	0.39	1.5	44	147	2370	12.10	10	< 1	< 0.01	< 10	2.94	720	< 1
N114022	205	294	1.2	4.16	< 2	400	< 0.5	< 2	0.34	2.0	36	144	3720	11.90	10	< 1	< 0.01	< 10	2.90	610	< 1
N114023	205	294	1.8	4.06	< 2	130	< 0.5	< 2	0.37	2.0	62	147	2700	10.55	10	< 1	< 0.01	< 10	3.07	645	< 1
N114024	205	294	3.4	4.06	< 2	70	< 0.5	< 2	0.36	3.0	111	125	4780	13.45	10	< 1	0.01	< 10	2.85	720	< 1
N114025	205	294	2.6	3.51	2	70	< 0.5	< 2	0.89	3.0	43	122	2500	9.60	10	< 1	0.03	< 10	2.68	665	< 1
N114026	205	294	1.4	4.05	< 2	60	< 0.5	< 2	0.52	3.0	38	134	1350	11.55	20	< 1	< 0.01	< 10	3.13	925	< 1
N114027	205	294	3.4	4.46	< 2	60	< 0.5	< 2	0.66	4.5	52	132	2860	10.90	10	< 1	0.03	< 10	3.42	1000	< 1
N114028	205	294	7.8	3.99	< 2	50	< 0.5	< 2	0.66	7.5	47	130	4070	10.55	10	< 1	0.02	< 10	2.97	770	< 1
N114029	205	294	5.6	4.60	< 2	90	< 0.5	< 2	0.63	5.0	52	128	3120	11.70	20	< 1	< 0.01	< 10	3.42	855	< 1
N114030	205	294	3.6	4.27	< 2	140	< 0.5	< 2	1.05	6.5	47	105	2790	9.26	20	< 1	0.01	< 10	3.38	745	< 1
N114031	205	294	0.6	4.14	< 2	110	< 0.5	< 2	1.31	7.5	48	109	1120	8.17	10	< 1	< 0.01	< 10	3.65	835	< 1
N114032	205	294	< 0.2	2.99	< 2	80	< 0.5	< 2	1.26	3.0	34	47	306	5.16	10	< 1	< 0.01	< 10	2.68	725	< 1
N114033	205	294	< 0.2	3.06	2	50	< 0.5	< 2	1.49	1.5	30	41	157	4.66	10	< 1	0.09	< 10	2.65	570	< 1
N114034	205	294	< 0.2	3.09	< 2	90	< 0.5	< 2	1.04	3.0	34	50	239	5.17	10	< 1	0.06	< 10	2.98	695	< 1
N114035	205	294	2.0	3.26	< 2	10	< 0.5	Intf*	0.15	3.5	303	67	>10000	>15.00	10	< 1	0.05	< 10	1.97	420	8
N114036	205	294	0.6	3.79	< 2	20	< 0.5	< 2	0.15	2.5	160	102	4600	14.60	10	< 1	0.07	< 10	2.29	395	2
N114037	205	294	1.4	3.41	2	10	< 0.5	< 2	0.27	4.5	251	112	9090	14.95	10	< 1	0.02	< 10	2.42	525	10
N114038	205	294	< 0.2	3.78	2	350	< 0.5	< 2	1.68	2.5	41	64	764	6.25	10	< 1	0.10	< 10	3.16	620	< 1
N114039	205	294	< 0.2	2.56	< 2	180	< 0.5	< 2	2.03	6.0	95	99	938	5.15	10	< 1	< 0.01	< 10	1.94	945	< 1
N114040	205	294	< 0.2	4.75	< 2	390	< 0.5	< 2	3.53	4.0	66	115	695	7.14	20	< 1	< 0.01	< 10	3.33	1115	< 1
N114041	205	294	< 0.2	3.85	2	170	< 0.5	< 2	2.81	4.0	48	97	162	5.96	10	< 1	< 0.01	< 10	2.74	845	< 1
N114042	205	294	< 0.2	3.40	< 2	80	< 0.5	< 2	2.11	6.0	52	148	294	4.68	10	< 1	0.05	< 10	2.51	765	< 1
N114043	205	294	< 0.2	3.90	< 2	70	< 0.5	< 2	3.35	2.0	35	47	140	5.87	10	< 1	< 0.01	< 10	2.58	1050	< 1

CERTIFICATION: Ian Bruchlan

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 : ICE-IC97-60
Comments:

Page Number :1-B
Total Pages :1
Certificate Date: 12-OCT-97
Invoice No. :I9745969
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745969

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
N114005	205	294	< 0.01	33	280	< 2	< 2	21	11	0.22	< 10	< 10	181	< 10	820
N114006	205	294	< 0.01	31	420	2	< 2	14	7	0.35	< 10	< 10	190	< 10	672
N114007	205	294	< 0.01	32	380	< 2	< 2	14	7	0.39	< 10	< 10	179	< 10	562
N114008	205	294	< 0.01	41	330	< 2	< 2	14	89	0.38	< 10	< 10	143	< 10	506
N114009	205	294	< 0.01	44	260	< 2	< 2	14	284	0.26	< 10	< 10	115	< 10	650
N114010	205	294	< 0.01	41	350	< 2	< 2	20	23	0.44	< 10	< 10	198	< 10	676
N114011	205	294	< 0.01	41	360	2	2	19	59	0.31	< 10	< 10	181	< 10	630
N114012	205	294	< 0.01	24	230	6	< 2	19	22	0.12	< 10	< 10	183	< 10	398
N114013	205	294	< 0.01	19	200	2	< 2	16	8	0.09	< 10	< 10	184	< 10	386
N114014	205	294	< 0.01	28	180	14	2	16	10	0.03	< 10	< 10	176	< 10	258
N114015	205	294	< 0.01	22	130	14	< 2	14	7	0.04	< 10	< 10	174	< 10	386
N114016	205	294	< 0.01	48	410	4	< 2	26	7	0.26	< 10	< 10	215	< 10	860
N114017	205	294	< 0.01	50	320	< 2	< 2	16	64	0.30	< 10	< 10	155	< 10	782
N114018	205	294	< 0.01	49	290	2	< 2	16	58	0.28	< 10	< 10	149	< 10	736
N114019	205	294	< 0.01	48	260	< 2	< 2	19	29	0.36	< 10	< 10	168	< 10	594
N114020	205	294	< 0.01	45	310	8	2	20	19	0.29	< 10	< 10	181	< 10	500
N114021	205	294	< 0.01	42	260	< 2	< 2	18	6	0.31	< 10	< 10	190	< 10	566
N114022	205	294	< 0.01	39	180	6	< 2	14	14	0.18	< 10	< 10	191	< 10	908
N114023	205	294	< 0.01	45	260	6	< 2	15	10	0.22	< 10	< 10	201	< 10	862
N114024	205	294	< 0.01	46	280	12	2	16	8	0.16	< 10	< 10	198	< 10	1640
N114025	205	294	< 0.01	38	280	4	< 2	19	6	0.37	< 10	< 10	224	< 10	918
N114026	205	294	< 0.01	43	290	4	< 2	17	11	0.36	< 10	< 10	212	< 10	938
N114027	205	294	< 0.01	43	320	12	< 2	16	21	0.34	< 10	< 10	214	< 10	1800
N114028	205	294	< 0.01	39	270	18	6	18	7	0.35	< 10	< 10	226	< 10	2480
N114029	205	294	< 0.01	39	260	14	< 2	15	11	0.37	< 10	< 10	220	< 10	1510
N114030	205	294	< 0.01	38	240	4	< 2	17	23	0.34	< 10	< 10	195	< 10	1510
N114031	205	294	< 0.01	43	300	2	< 2	19	13	0.41	< 10	< 10	201	< 10	1230
N114032	205	294	< 0.01	29	310	< 2	< 2	7	7	0.33	< 10	< 10	132	< 10	544
N114033	205	294	< 0.01	28	330	< 2	< 2	5	11	0.30	< 10	< 10	110	< 10	248
N114034	205	294	< 0.01	29	300	< 2	< 2	7	5	0.24	< 10	< 10	120	< 10	386
N114035	205	294	< 0.01	22	Intf*	12	4	10	2	0.13	< 10	< 10	117	< 10	596
N114036	205	294	< 0.01	29	70	2	< 2	12	2	0.10	< 10	< 10	115	< 10	380
N114037	205	294	< 0.01	35	80	12	2	9	28	0.17	< 10	< 10	108	< 10	1360
N114038	205	294	< 0.01	34	330	< 2	2	9	11	0.37	< 10	< 10	163	< 10	372
N114039	205	294	< 0.01	32	180	< 2	< 2	9	143	0.26	< 10	< 10	99	< 10	1605
N114040	205	294	< 0.01	44	310	< 2	< 2	18	12	0.37	< 10	< 10	216	< 10	552
N114041	205	294	< 0.01	39	300	< 2	< 2	14	8	0.34	< 10	< 10	179	< 10	518
N114042	205	294	0.01	74	210	< 2	< 2	9	14	0.24	< 10	< 10	113	< 10	810
N114043	205	294	< 0.01	38	390	< 2	< 2	10	12	0.46	< 10	< 10	177	< 10	148

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 : ICE-IC97-85
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 11-OCT-97
Invoice No. : 19745968
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745968

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
N114573	205	294	2.6	3.56	< 2	270	< 0.5	< 2	0.83	2.0	21	163	2120	7.32	10	< 1	0.05	< 10	1.77	375	< 1
N114574	205	294	0.2	3.81	< 2	100	< 0.5	< 2	1.55	3.0	29	150	1625	6.30	10	1	0.07	< 10	2.29	505	< 1
N114575	205	294	< 0.2	3.71	< 2	110	< 0.5	< 2	1.71	3.0	32	129	1225	5.65	10	< 1	0.05	< 10	2.35	555	< 1
N114576	205	294	< 0.2	3.56	< 2	90	< 0.5	< 2	1.59	2.5	33	139	1115	6.55	10	1	0.01	< 10	2.68	625	< 1
N114577	205	294	< 0.2	4.79	< 2	80	< 0.5	< 2	2.54	4.5	37	161	1295	7.70	10	< 1	< 0.01	< 10	3.00	850	< 1
N114578	205	294	< 0.2	4.92	< 2	80	< 0.5	< 2	3.23	6.0	54	123	1915	8.10	10	< 1	< 0.01	< 10	2.41	845	< 1
N114579	205	294	< 0.2	4.28	< 2	40	< 0.5	< 2	1.90	6.5	57	173	2940	8.36	10	< 1	< 0.01	< 10	2.32	695	< 1
N114580	205	294	< 0.2	3.57	< 2	60	< 0.5	< 2	0.68	3.0	84	166	3380	9.66	10	< 1	0.01	< 10	2.47	870	< 1
N114581	205	294	0.2	3.89	< 2	50	< 0.5	< 2	0.93	2.5	34	170	1785	9.62	10	< 1	< 0.01	< 10	3.03	730	< 1
N114582	205	294	< 0.2	4.35	< 2	50	< 0.5	< 2	1.37	4.0	32	179	1475	9.39	10	< 1	< 0.01	< 10	2.99	740	< 1
N114583	205	294	< 0.2	4.82	< 2	80	< 0.5	< 2	1.20	8.5	43	209	2510	10.85	10	< 1	< 0.01	< 10	3.33	855	< 1
N114584	205	294	< 0.2	4.15	< 2	60	< 0.5	< 2	0.50	5.5	70	200	6250	11.35	10	< 1	< 0.01	< 10	2.51	655	1
N114585	205	294	< 0.2	3.89	< 2	60	< 0.5	< 2	0.19	5.5	90	204	6930	12.15	10	< 1	0.03	< 10	2.49	800	< 1
N114586	205	294	0.2	4.14	< 2	40	< 0.5	< 2	0.47	10.0	46	172	4520	11.60	10	< 1	0.06	< 10	2.61	695	< 1
N114587	205	294	< 0.2	3.61	< 2	60	< 0.5	< 2	0.49	5.5	57	179	1720	10.85	10	< 1	0.12	< 10	2.39	705	< 1
N114588	205	294	0.2	4.45	< 2	40	< 0.5	< 2	0.45	4.0	60	181	2490	13.15	10	< 1	0.04	< 10	2.87	885	< 1
N114589	205	294	< 0.2	3.72	< 2	50	< 0.5	< 2	2.38	2.5	50	123	282	5.38	10	< 1	0.05	< 10	2.46	660	< 1
N114590	205	294	< 0.2	3.92	< 2	90	< 0.5	< 2	2.30	4.5	55	129	298	5.30	10	< 1	0.06	< 10	2.66	790	< 1
N114591	205	294	< 0.2	4.35	< 2	200	< 0.5	< 2	2.15	11.0	77	176	512	6.79	10	< 1	0.01	< 10	3.15	1100	< 1
N114592	205	294	< 0.2	4.00	< 2	100	< 0.5	< 2	2.41	2.5	42	136	214	8.54	10	< 1	< 0.01	< 10	2.83	965	< 1
N114593	205	294	< 0.2	4.20	< 2	30	< 0.5	< 2	1.55	2.0	60	140	600	10.15	10	< 1	0.04	< 10	3.06	1235	< 1

CERTIFICATION: Ian Bradley

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 : ICE-IC97-85
Comments:

Page Number :1-B
Total Pages :1
Certificate Date: 11-OCT-97
Invoice No. :19745968
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745968

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
N114573	205	294	< 0.01	37	190	< 2	2	14	11	0.19	< 10	< 10	129	< 10	252
N114574	205	294	0.02	56	170	< 2	< 2	14	11	0.23	< 10	< 10	120	< 10	360
N114575	205	294	0.01	58	170	< 2	< 2	12	13	0.22	< 10	< 10	103	< 10	362
N114576	205	294	0.03	60	240	< 2	< 2	12	10	0.25	< 10	< 10	111	< 10	370
N114577	205	294	0.01	66	300	< 2	< 2	12	13	0.25	< 10	< 10	140	< 10	484
N114578	205	294	0.01	60	250	< 2	4	12	12	0.24	< 10	< 10	135	< 10	802
N114579	205	294	0.01	60	180	< 2	< 2	17	9	0.18	< 10	< 10	133	< 10	996
N114580	205	294	0.01	63	220	< 2	< 2	16	7	0.16	< 10	< 10	119	< 10	1170
N114581	205	294	< 0.01	69	200	< 2	< 2	11	7	0.22	< 10	< 10	101	< 10	596
N114582	205	294	0.01	63	230	< 2	< 2	11	7	0.23	< 10	< 10	118	< 10	500
N114583	205	294	< 0.01	67	210	< 2	< 2	15	7	0.21	< 10	< 10	119	< 10	950
N114584	205	294	0.01	57	130	2	< 2	17	7	0.11	< 10	< 10	114	< 10	1330
N114585	205	294	0.01	59	200	2	< 2	18	4	0.01	< 10	< 10	131	< 10	2540
N114586	205	294	0.01	52	180	4	< 2	10	12	0.06	< 10	< 10	125	< 10	1255
N114587	205	294	0.01	58	200	< 2	< 2	11	9	0.11	< 10	< 10	126	< 10	1615
N114588	205	294	0.01	53	240	< 2	< 2	10	11	0.07	< 10	< 10	135	< 10	1465
N114589	205	294	0.02	53	190	< 2	< 2	10	12	0.12	< 10	< 10	97	< 10	746
N114590	205	294	0.02	55	200	< 2	< 2	10	11	0.16	< 10	< 10	98	< 10	952
N114591	205	294	0.01	55	220	2	< 2	14	14	0.23	< 10	< 10	138	< 10	1495
N114592	205	294	< 0.01	48	350	< 2	2	19	29	0.40	< 10	< 10	209	< 10	664
N114593	205	294	0.01	50	310	< 2	2	24	17	0.07	< 10	< 10	194	< 10	606

CERTIFICATION: [signature]

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

o: CHEMEX QUALITY CONTROL
DUPLICATE SAMPLE SUBMISSIONS

Project : MPO_A9743717
Comments:

Page ber :1-A
Total Pages :1
Certificate Date: 15-OCT-97
Invoice No. :I9745935
P.O. Number :
Account :QUA

CERTIFICATE OF ANALYSIS A9745935

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
N113862	205	234	1.6	2.56	2	590	< 0.5	< 2	1.53	1.5	25	73	4420	5.83	< 10	< 1	0.09	< 10	1.24	520	< 1
N113862-SILICA	205	234	< 0.2	0.05	2	< 10	< 0.5	< 2	0.01	< 0.5	< 1	189	7	0.30	< 10	< 1	0.01	< 10	< 0.01	10	< 1
N113863	205	234	64.0	0.10	4	140	< 0.5	< 2	0.06	0.5	4	101	266	2.66	< 10	13	0.01	< 10	0.05	25	5
N113863-SILICA	205	234	< 0.2	0.05	10	< 10	< 0.5	< 2	0.03	< 0.5	< 1	174	5	0.30	< 10	< 1	0.01	< 10	0.01	20	< 1

CERTIFICATION: Ian Bradshaw

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: CHEMEX QUALITY CONTROL
DUPLICATE SAMPLE SUBMISSIONS

Project : MPO_A9743717
Comments:

Certificate Date: 15-OCT-97
Invoice No. : I9745935
P.O. Number :
Account :QUA

CERTIFICATE OF ANALYSIS A9745935

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
N113862	205	234	< 0.01	29	540	6	2	11	32	0.34	< 10	< 10	145	< 10	182
N113862-SILICA	205	234	< 0.01	2	10	< 2	< 2	< 1	1	< 0.01	< 10	< 10	1	< 10	2
N113863	205	234	< 0.01	3	60	10	< 2	< 1	4	0.04	< 10	< 10	17	< 10	222
N113863-SILICA	205	234	< 0.01	3	20	18	< 2	< 1	1	< 0.01	< 10	< 10	1	< 10	12

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 : ICE-IC97-82
Comments:

Page Number :1-A
Total Pages :1
Certificate Date: 12-OCT-97
Invoice No. :19745820
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745820

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
N114451	205	294	12.8	1.93	< 2	550	< 0.5	< 2	0.28	< 0.5	27	121	2820	>15.00	< 10	< 1	0.01	< 10	0.77	150	7
N114452	205	294	8.0	1.21	28	80	< 0.5	< 2	0.26	< 0.5	20	146	3370	>15.00	10	2	0.03	< 10	0.15	90	25
N114453	205	294	4.4	1.46	10	70	< 0.5	< 2	0.24	< 0.5	24	198	4190	>15.00	20	< 1	0.06	< 10	0.36	80	3
N114454	205	294	6.4	0.68	20	30	< 0.5	2	0.05	< 0.5	5	150	1565	>15.00	10	1	0.09	< 10	0.03	10	28
N114455	205	294	17.4	0.55	10	50	< 0.5	< 2	0.04	< 0.5	39	121	1535	13.75	< 10	< 1	0.06	< 10	0.10	40	23
N114456	205	294	15.4	2.01	16	< 10	< 0.5	Intf*	0.01	< 0.5	298	182	>10000	>15.00	20	< 1	0.03	< 10	0.69	60	11
N114457	205	294	9.4	1.69	2	< 10	< 0.5	Intf*	0.11	< 0.5	385	130	>10000	>15.00	< 10	< 1	0.05	< 10	0.54	50	7
N114458	205	294	3.2	1.12	2	< 10	< 0.5	< 2	0.07	< 0.5	276	152	2570	>15.00	< 10	< 1	0.12	< 10	0.20	20	14
N114459	205	294	1.8	1.63	8	< 10	< 0.5	< 2	0.06	< 0.5	359	101	3630	>15.00	< 10	< 1	0.04	< 10	0.70	55	4
N114460	205	294	2.2	2.38	< 2	< 10	< 0.5	< 2	0.13	< 0.5	211	170	4860	>15.00	< 10	< 1	0.07	< 10	0.79	75	10
N114461	205	294	0.8	3.01	< 2	10	< 0.5	< 2	0.12	< 0.5	203	169	4830	>15.00	< 10	< 1	0.03	< 10	1.55	200	12
N114462	205	294	< 0.2	6.47	< 2	180	< 0.5	< 2	0.21	< 0.5	70	217	4960	13.55	< 10	< 1	0.04	< 10	3.88	720	< 1
N114463	205	294	0.2	4.68	< 2	40	< 0.5	Intf*	0.65	1.5	52	201	>10000	13.65	< 10	< 1	0.01	< 10	2.87	675	< 1
N114464	205	294	< 0.2	3.73	< 2	70	< 0.5	< 2	1.32	4.0	28	113	3500	6.32	< 10	< 1	0.12	< 10	2.58	585	< 1
N114465	205	294	< 0.2	4.56	< 2	50	< 0.5	Intf*	0.23	< 0.5	54	206	>10000	13.80	< 10	< 1	0.09	< 10	3.11	720	< 1
N114466	205	294	< 0.2	5.28	< 2	110	< 0.5	< 2	0.17	< 0.5	32	256	8750	10.10	10	< 1	0.04	< 10	2.95	615	< 1
N114467	205	294	< 0.2	0.33	10	< 10	< 0.5	< 2	0.04	< 0.5	847	47	6070	>15.00	< 10	< 1	0.11	< 10	0.08	5	19
N114468	205	294	< 0.2	0.55	12	< 10	< 0.5	< 2	0.04	< 0.5	792	72	6890	>15.00	10	< 1	0.14	< 10	0.08	15	13
N114469	205	294	< 0.2	1.69	< 2	< 10	< 0.5	Intf*	0.05	< 0.5	426	122	>10000	>15.00	10	< 1	0.25	< 10	0.09	50	7
N114470	205	294	< 0.2	2.34	< 2	30	< 0.5	Intf*	0.28	17.5	369	90	>10000	>15.00	< 10	< 1	0.07	< 10	0.77	1050	5
N114471	205	294	< 0.2	3.27	< 2	60	< 0.5	< 2	0.40	5.5	104	159	2400	13.45	< 10	< 1	0.02	< 10	2.29	885	< 1
N114472	205	294	< 0.2	3.15	< 2	50	< 0.5	< 2	0.47	< 0.5	85	124	458	11.45	< 10	< 1	0.08	< 10	2.22	715	< 1
N114473	205	294	< 0.2	3.68	< 2	30	< 0.5	< 2	2.07	< 0.5	61	136	232	9.81	< 10	< 1	0.03	< 10	3.14	1045	< 1

CERTIFICATION: Ian Bucklen

* INTERFERENCES: Cu on Bi and P

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 : ICE-IC97-82
Comments:

Page Number :1-B
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Certificate Date: 12-OCT-97
Invoice No. :I9745820
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745820

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
N114451	205	294	< 0.01	18	90	14	< 2	7	9	0.04	< 10	< 10	95	< 10	192
N114452	205	294	< 0.01	8	270	26	2	8	7	0.05	< 10	< 10	129	< 10	234
N114453	205	294	< 0.01	7	80	26	< 2	7	5	< 0.01	< 10	< 10	162	< 10	248
N114454	205	294	< 0.01	< 1	110	38	2	4	2	< 0.01	< 10	< 10	117	< 10	322
N114455	205	294	< 0.01	3	120	30	< 2	3	3	0.01	< 10	< 10	70	< 10	164
N114456	205	294	< 0.01	19	Intf*	26	2	7	6	0.01	< 10	< 10	131	< 10	268
N114457	205	294	< 0.01	20	Intf*	16	< 2	6	3	< 0.01	< 10	< 10	90	< 10	370
N114458	205	294	< 0.01	13	70	6	2	5	1	< 0.01	< 10	< 10	92	< 10	274
N114459	205	294	< 0.01	19	< 10	< 2	< 2	5	2	< 0.01	< 10	< 10	57	< 10	446
N114460	205	294	< 0.01	24	30	6	< 2	9	3	< 0.01	< 10	< 10	113	< 10	600
N114461	205	294	< 0.01	28	50	< 2	< 2	10	4	< 0.01	< 10	< 10	99	< 10	614
N114462	205	294	< 0.01	56	260	< 2	2	21	15	0.04	< 10	< 10	158	< 10	964
N114463	205	294	< 0.01	53	Intf*	< 2	2	17	24	0.15	< 10	< 10	143	< 10	890
N114464	205	294	< 0.01	63	190	< 2	< 2	15	5	0.26	< 10	< 10	124	< 10	1190
N114465	205	294	< 0.01	59	Intf*	< 2	< 2	21	15	0.16	< 10	< 10	145	< 10	680
N114466	205	294	0.01	65	80	< 2	< 2	21	6	0.01	< 10	< 10	155	< 10	722
N114467	205	294	< 0.01	24	30	< 2	< 2	1	6	< 0.01	< 10	< 10	7	< 10	192
N114468	205	294	< 0.01	35	90	< 2	2	3	3	< 0.01	< 10	< 10	47	< 10	276
N114469	205	294	< 0.01	35	Intf*	< 2	< 2	7	26	< 0.01	< 10	< 10	88	< 10	720
N114470	205	294	< 0.01	40	Intf*	< 2	< 2	21	3	< 0.01	< 10	< 10	94	< 10	8300
N114471	205	294	0.01	66	430	< 2	< 2	25	5	0.05	< 10	< 10	166	< 10	2640
N114472	205	294	0.01	71	380	< 2	< 2	23	6	< 0.01	< 10	< 10	141	< 10	1000
N114473	205	294	0.01	59	290	< 2	< 2	27	20	0.08	< 10	< 10	193	< 10	414

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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

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

Project : ICE-IC97-64
Comments:

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Invoice No. : I9745818
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Account : MPO

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CERTIFICATE OF ANALYSIS A9745818

SAMPLE	PREP CODE		Cu %	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
N114153	208	226	0.05	0.8	0.03	24	10	< 0.5	< 2	0.01	< 0.5	188	104	472	7.65	< 10	< 1	< 0.01	< 10	0.02	10
N114154	208	226	0.13	1.0	< 0.01	118	10	< 0.5	< 2	0.01	< 0.5	180	91	1185	9.60	< 10	1	< 0.01	< 10	0.01	10
N114155	208	226	0.73	1.4	< 0.01	30	< 10	< 0.5	< 2	0.01	< 0.5	227	113	6350	12.90	< 10	< 1	< 0.01	< 10	< 0.01	5
N114156	208	226	2.15	1.2	0.01	58	< 10	< 0.5	Intf*	< 0.01	2.0	193	62	>10000	>15.00	10	1	0.01	< 10	< 0.01	< 5
N114157	208	226	4.12	2.2	0.09	64	< 10	< 0.5	Intf*	0.01	4.5	184	143	>10000	13.30	60	< 1	0.08	< 10	< 0.01	5
N114158	208	226	4.14	4.4	2.29	116	10	< 0.5	Intf*	0.04	1.5	98	149	>10000	12.30	20	< 1	0.08	< 10	0.04	5
N114159	208	226	2.97	1.6	2.25	184	10	< 0.5	Intf*	0.04	8.0	99	121	>10000	12.35	10	3	0.01	< 10	0.53	30

CERTIFICATION: Stewart Bradley

*INTERFERENCE: Cu ON Bi AND P.

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

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WHITEHORSE, YT
Y1A 3S9

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CERTIFICATE OF ANALYSIS A9745818

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N114153	208	226	10	< 0.01	6	< 10	10	< 2	< 1	1	< 0.01	< 10	< 10	3	< 10	28
N114154	208	226	18	< 0.01	7	< 10	16	< 2	< 1	< 1	< 0.01	< 10	< 10	3	< 10	30
N114155	208	226	31	< 0.01	3	10	20	< 2	< 1	< 1	0.01	< 10	< 10	3	< 10	62
N114156	208	226	79	< 0.01	1	Intf*	92	< 2	2	7	0.04	< 10	10	20	< 10	624
N114157	208	226	160	< 0.01	5	Intf*	34	< 2	2	26	0.08	< 10	10	49	30	860
N114158	208	226	17	0.01	13	Intf*	52	< 2	6	41	< 0.01	< 10	10	247	< 10	680
N114159	208	226	8	< 0.01	18	Intf*	36	< 2	8	4	< 0.01	< 10	10	200	< 10	4310

CERTIFICATION: _____

*INTERFERENCE: Cu ON Bi AND P.

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

Project : ICE-IC97-64
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CERTIFICATE OF ANALYSIS A9745816

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
N114151	205	226	1.0	0.13	< 2	50	< 0.5	< 2	0.04	< 0.5	3	143	798	4.46	< 10	< 1	0.01	< 10	0.01	15	4
N114152	205	226	0.8	0.05	2	30	< 0.5	< 2	0.01	< 0.5	1	127	612	4.01	< 10	< 1	< 0.01	< 10	0.01	5	4
N114160	205	226	0.6	5.43	< 2	80	< 0.5	Intf*	0.07	1.5	52	130	>10000	10.15	10	< 1	0.03	< 10	3.47	540	2
N114161	205	226	0.2	5.28	2	30	< 0.5	Intf*	0.03	4.0	109	93	>10000	13.35	10	< 1	0.01	< 10	3.81	630	< 1
N114162	205	226	< 0.2	4.90	< 2	430	< 0.5	Intf*	0.50	10.0	86	134	>10000	7.97	10	< 1	0.13	< 10	1.69	705	< 1
N114163	205	226	< 0.2	4.44	< 2	230	< 0.5	< 2	1.14	12.0	109	101	7800	10.55	10	< 1	0.13	< 10	2.07	1045	< 1
N114164	205	226	< 0.2	3.44	< 2	200	< 0.5	< 2	3.09	7.0	120	90	557	10.25	10	< 1	0.11	< 10	2.45	1335	< 1
N114165	205	226	< 0.2	3.81	< 2	60	< 0.5	< 2	4.17	< 0.5	39	116	194	6.90	10	< 1	0.09	< 10	3.22	1030	< 1

CERTIFICATION: Ian Pearson

*INTERFERENCE: Cu ON Bi AND P.

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

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

Project : ICE-IC97-64
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CERTIFICATE OF ANALYSIS A9745816

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
N114151	205	226	0.01	2	10	6	< 2	< 1	6	< 0.01	< 10	< 10	3	< 10	12
N114152	205	226	< 0.01	2	10	4	< 2	< 1	1	< 0.01	< 10	< 10	13	< 10	8
N114160	205	226	< 0.01	35	Intf*	16	< 2	21	7	< 0.01	< 10	10	226	< 10	1455
N114161	205	226	< 0.01	29	Intf*	8	< 2	17	< 1	< 0.01	< 10	10	219	< 10	1325
N114162	205	226	0.01	43	Intf*	2	2	29	13	< 0.01	< 10	10	160	< 10	2730
N114163	205	226	0.01	46	420	4	2	31	9	0.12	< 10	10	231	< 10	1990
N114164	205	226	0.01	42	330	< 2	< 2	29	33	0.17	< 10	10	221	< 10	1360
N114165	205	226	0.01	41	340	2	2	28	40	0.33	< 10	10	236	< 10	130

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*INTERFERENCE: Cu ON Bi AND P.

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 : ICE-IC97-79
Comments:

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Certificate Date: 11-OCT-97
Invoice No. : I9745815
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745815

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
N114368	205	294	< 0.2	4.18	< 2	150	< 0.5	< 2	2.33	1.5	38	156	1340	5.64	14	< 1	0.02	< 1	2.48	660	< 1
N114369	205	294	< 0.2	4.37	< 2	310	< 0.5	< 2	3.06	1.0	33	177	1100	5.47	10	< 1	0.01	< 10	2.59	695	< 1
N114370	205	294	< 0.2	4.08	< 2	120	< 0.5	< 2	2.84	< 0.5	35	112	820	4.41	10	< 1	0.03	< 10	2.32	680	< 1
N114371	205	294	< 0.2	3.91	< 2	190	< 0.5	< 2	2.67	0.5	30	135	1030	4.40	10	< 1	0.03	< 10	2.32	635	< 1
N114372	205	294	< 0.2	4.30	< 2	120	< 0.5	< 2	3.10	0.5	28	109	943	4.92	10	< 1	< 0.01	< 10	2.45	620	< 1
N114373	205	294	< 0.2	4.26	< 2	220	< 0.5	< 2	2.81	1.5	39	172	1790	5.09	10	< 1	0.01	< 10	2.62	730	< 1
N114374	205	294	< 0.2	4.06	< 2	250	< 0.5	< 2	2.13	1.0	31	195	1365	5.06	10	< 1	0.01	< 10	2.96	775	< 1
N114375	205	294	< 0.2	4.03	< 2	240	< 0.5	< 2	2.33	1.0	34	121	1215	4.64	10	< 1	0.09	< 10	2.53	765	< 1
N114376	205	294	< 0.2	4.27	< 2	200	< 0.5	< 2	2.44	1.5	33	159	1060	4.78	10	< 1	0.04	< 10	2.82	760	< 1
N114377	205	294	< 0.2	4.17	< 2	260	< 0.5	< 2	2.51	1.5	26	160	1940	5.44	10	< 1	0.04	< 10	2.52	705	< 1
N114378	205	294	< 0.2	4.07	< 2	320	< 0.5	< 2	2.04	1.5	25	183	2420	6.91	10	< 1	0.04	< 10	2.68	680	< 1
N114379	205	294	0.2	3.37	< 2	210	< 0.5	< 2	1.61	1.5	29	196	1710	6.22	10	< 1	0.03	< 10	2.51	610	< 1
N114380	205	294	< 0.2	3.66	< 2	150	< 0.5	< 2	2.06	1.5	31	171	2140	6.33	10	< 1	0.01	< 10	2.52	680	< 1
N114381	205	294	0.2	3.42	< 2	120	< 0.5	< 2	1.54	1.5	44	81	2710	7.72	10	< 1	< 0.01	< 10	2.63	700	< 1
N114382	205	294	0.6	3.72	< 2	60	< 0.5	< 2	1.76	0.5	40	107	562	5.89	10	< 1	0.03	< 10	3.09	1010	< 1
N114383	205	294	0.6	3.54	< 2	90	< 0.5	< 2	1.76	3.0	38	113	297	5.92	10	< 1	0.01	< 10	2.88	1060	< 1
N114384	205	294	0.2	3.97	2	120	< 0.5	< 2	1.76	2.5	41	125	293	7.22	10	< 1	0.01	< 10	3.17	1245	< 1
N114385	205	294	0.2	3.96	< 2	150	< 0.5	< 2	1.37	4.0	36	138	1520	7.48	10	< 1	< 0.01	< 10	3.31	1020	< 1
N114386	205	294	0.2	3.98	< 2	500	< 0.5	< 2	0.76	1.5	59	173	2150	9.08	10	< 1	< 0.01	< 10	3.20	720	< 1
N114387	205	294	< 0.2	4.24	< 2	150	< 0.5	< 2	0.55	2.0	64	171	3350	11.40	10	< 1	0.02	< 10	3.11	685	< 1
N114388	205	294	< 0.2	4.09	< 2	150	< 0.5	< 2	0.55	2.5	74	158	2900	11.15	10	< 1	0.01	< 10	3.16	675	< 1
N114389	205	294	< 0.2	3.91	< 2	500	< 0.5	< 2	0.86	2.5	73	169	1005	8.49	10	< 1	0.01	< 10	3.29	655	< 1
N114390	205	294	0.4	4.38	< 2	90	< 0.5	< 2	0.48	1.0	126	154	2130	13.10	10	< 1	0.01	< 10	3.13	665	< 1
N114391	205	294	< 0.2	4.06	< 2	90	< 0.5	< 2	0.56	1.0	99	158	3480	12.30	10	< 1	< 0.01	< 10	3.09	650	< 1
N114392	205	294	0.2	4.11	< 2	150	< 0.5	< 2	0.76	3.0	57	145	1860	10.15	10	< 1	0.01	< 10	3.48	790	< 1
N114393	205	294	< 0.2	3.79	< 2	1470	< 0.5	< 2	0.97	1.5	70	140	964	7.25	10	< 1	< 0.01	< 10	3.46	755	< 1
N114394	205	294	< 0.2	3.35	< 2	120	< 0.5	< 2	0.77	2.5	72	140	2820	9.58	10	< 1	< 0.01	< 10	2.82	715	< 1
N114395	205	294	< 0.2	3.42	< 2	320	< 0.5	< 2	0.52	3.5	87	134	3530	10.70	10	< 1	0.01	< 10	2.57	625	< 1
N114396	205	294	< 0.2	3.89	< 2	460	< 0.5	< 2	1.24	4.0	90	139	1710	8.46	10	< 1	0.02	< 10	3.06	680	< 1
N114397	205	294	< 0.2	3.66	< 2	190	< 0.5	< 2	0.89	3.0	68	133	4390	9.41	10	< 1	< 0.01	< 10	3.01	755	< 1
N114398	205	294	0.2	4.43	< 2	260	< 0.5	< 2	1.07	4.5	66	140	1895	9.36	10	< 1	< 0.01	< 10	3.58	820	< 1
N114399	205	294	3.2	4.09	< 2	10	< 0.5	< 2	1.32	3.0	62	124	2370	12.60	10	< 1	< 0.01	< 10	3.34	950	< 1
N114400	205	294	0.6	3.81	< 2	80	< 0.5	< 2	1.10	3.5	59	109	1245	8.82	10	< 1	0.04	< 10	3.25	655	< 1

CERTIFICATION: B. Cathro

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 : ICE-IC97-79
Comments:

Certificate Date: 11-OCT-97
Invoice No. :19745815
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745815

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
N114368	205	294	0.04	58	278	< 2	3	18	10	0.21	< 10	< 10	163	< 10	245
N114369	205	294	0.03	56	230	4	2	15	14	0.28	< 10	< 10	159	< 10	184
N114370	205	294	0.04	59	220	< 2	2	8	11	0.25	< 10	< 10	119	< 10	150
N114371	205	294	0.03	56	220	< 2	< 2	12	11	0.26	< 10	< 10	132	< 10	142
N114372	205	294	0.03	56	260	2	< 2	10	12	0.24	< 10	< 10	128	< 10	134
N114373	205	294	0.02	59	270	2	< 2	16	12	0.27	< 10	< 10	153	< 10	172
N114374	205	294	0.02	57	240	2	< 2	16	15	0.29	< 10	< 10	155	< 10	144
N114375	205	294	0.03	57	240	< 2	< 2	11	9	0.22	< 10	< 10	119	< 10	150
N114376	205	294	0.03	58	280	< 2	2	13	9	0.24	< 10	< 10	130	< 10	164
N114377	205	294	0.03	51	220	< 2	< 2	13	16	0.27	< 10	< 10	160	< 10	196
N114378	205	294	0.03	51	220	< 2	< 2	18	10	0.28	< 10	< 10	189	< 10	298
N114379	205	294	0.04	49	210	2	< 2	18	7	0.30	< 10	< 10	185	< 10	286
N114380	205	294	0.04	43	220	2	< 2	15	10	0.30	< 10	< 10	174	< 10	302
N114381	205	294	0.02	33	300	< 2	< 2	13	21	0.35	< 10	< 10	171	< 10	310
N114382	205	294	0.02	45	310	6	< 2	15	6	0.37	< 10	< 10	181	< 10	374
N114383	205	294	0.01	46	290	6	< 2	14	9	0.39	< 10	< 10	203	< 10	1000
N114384	205	294	0.02	45	330	4	2	14	28	0.40	< 10	< 10	203	< 10	1265
N114385	205	294	0.01	42	290	6	< 2	17	30	0.41	< 10	< 10	214	< 10	1245
N114386	205	294	< 0.01	52	260	2	< 2	18	37	0.34	< 10	< 10	204	< 10	1170
N114387	205	294	< 0.01	50	270	2	< 2	21	19	0.29	< 10	10	213	< 10	1015
N114388	205	294	< 0.01	50	270	< 2	< 2	17	17	0.27	< 10	10	188	< 10	1540
N114389	205	294	< 0.01	53	290	< 2	< 2	22	33	0.43	< 10	< 10	236	< 10	1750
N114390	205	294	< 0.01	48	290	8	< 2	23	5	0.29	< 10	10	253	< 10	1065
N114391	205	294	< 0.01	47	280	2	< 2	24	6	0.34	< 10	10	235	< 10	884
N114392	205	294	0.01	48	350	< 2	< 2	21	14	0.39	< 10	< 10	233	< 10	1090
N114393	205	294	0.01	49	290	< 2	< 2	16	35	0.44	< 10	< 10	216	< 10	1210
N114394	205	294	0.01	48	370	< 2	< 2	19	22	0.41	< 10	< 10	198	< 10	1530
N114395	205	294	0.01	48	350	6	< 2	21	18	0.24	< 10	< 10	188	< 10	2010
N114396	205	294	< 0.01	52	310	< 2	< 2	23	23	0.40	< 10	< 10	221	< 10	1530
N114397	205	294	0.01	47	350	< 2	2	21	27	0.37	< 10	< 10	167	< 10	1585
N114398	205	294	< 0.01	51	360	< 2	< 2	18	29	0.41	< 10	10	192	< 10	2310
N114399	205	294	< 0.01	46	350	12	< 2	18	16	0.36	< 10	10	269	< 10	1200
N114400	205	294	0.01	49	370	2	< 2	16	16	0.36	< 10	< 10	199	< 10	1075

CERTIFICATION: B. Campbell

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

o: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-63
Comments:

Page Number :1-A
Total Pages :1
Certificate Date: 12-OCT-97
Invoice No. :I9745814
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745814

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
N114092	205	294	< 0.2	4.05	< 2	330	< 0.5	< 2	0.89	2.5	37	128	1500	6.45	10	< 1	0.18	< 10	3.78	1025	< 1
N114093	205	294	< 0.2	3.14	< 2	350	< 0.5	< 2	1.75	4.0	28	75	1495	5.42	10	< 1	0.11	< 10	2.15	685	< 1
N114094	205	294	< 0.2	3.31	4	340	< 0.5	< 2	1.12	3.5	29	98	1490	5.29	10	< 1	0.07	< 10	2.55	685	< 1
N114095	205	294	< 0.2	3.49	< 2	270	< 0.5	< 2	0.62	2.0	35	116	2920	6.14	10	< 1	0.16	< 10	3.34	930	< 1
N114096	205	294	< 0.2	2.97	< 2	110	< 0.5	< 2	0.88	2.0	33	109	2070	5.73	10	< 1	0.11	< 10	2.97	865	< 1
N114097	205	294	< 0.2	3.42	< 2	70	< 0.5	< 2	1.10	2.5	38	144	2560	6.23	10	< 1	0.13	< 10	3.48	1010	< 1
N114098	205	294	< 0.2	3.37	< 2	200	< 0.5	< 2	1.90	8.0	42	155	9730	6.22	10	< 1	0.16	< 10	2.69	740	< 1
N114099	205	294	< 0.2	3.42	< 2	100	< 0.5	< 2	2.74	9.0	38	122	5170	5.90	10	< 1	0.03	< 10	2.15	635	< 1
N114100	205	294	< 0.2	3.71	< 2	60	< 0.5	< 2	1.52	4.0	41	113	7370	6.73	10	< 1	0.13	< 10	3.09	880	< 1
N114166	205	294	< 0.2	2.99	< 2	60	< 0.5	< 2	1.72	5.5	37	80	9680	7.02	10	< 1	0.07	< 10	2.19	660	< 1
N114167	205	294	< 0.2	2.57	< 2	60	< 0.5	< 2	1.68	3.5	26	69	5080	5.23	10	< 1	0.04	< 10	2.07	665	< 1
N114168	205	294	< 0.2	3.13	< 2	50	< 0.5	< 2	1.99	4.0	34	67	5970	6.25	10	< 1	0.01	< 10	2.30	790	< 1
N114169	205	294	< 0.2	3.54	4	300	< 0.5	< 2	2.26	6.0	48	90	7020	6.69	10	< 1	0.01	< 10	2.47	870	< 1
N114170	205	294	< 0.2	3.80	6	680	< 0.5	< 2	2.90	8.5	72	83	1260	7.70	10	< 1	< 0.01	< 10	2.55	1180	< 1
N114171	205	294	< 0.2	3.16	< 2	70	< 0.5	< 2	2.78	1.5	73	58	332	7.31	10	< 1	< 0.01	< 10	1.94	1195	< 1

CERTIFICATION: Ian Bichler

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 : ICE-IC97-63
Comments:

Certificate Date: 12-OCT-97
Invoice No. : 19745814
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745814

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
N114092	205	294	< 0.01	57	210	< 2	< 2	19	10	0.40	< 10	< 10	98	< 10	164
N114093	205	294	< 0.01	37	280	< 2	< 2	13	12	0.32	< 10	< 10	124	< 10	144
N114094	205	294	< 0.01	43	180	< 2	< 2	16	12	0.24	< 10	< 10	106	< 10	178
N114095	205	294	< 0.01	58	170	< 2	< 2	19	6	0.31	< 10	< 10	90	< 10	200
N114096	205	294	< 0.01	48	240	< 2	< 2	16	6	0.36	< 10	< 10	106	< 10	174
N114097	205	294	< 0.01	53	240	< 2	< 2	21	6	0.47	< 10	< 10	137	< 10	216
N114098	205	294	< 0.01	53	210	< 2	< 2	25	13	0.35	< 10	< 10	147	< 10	268
N114099	205	294	< 0.01	49	230	< 2	< 2	16	20	0.31	< 10	< 10	148	< 10	262
N114100	205	294	< 0.01	52	220	< 2	< 2	20	11	0.32	< 10	< 10	142	< 10	268
N114166	205	294	< 0.01	36	300	< 2	< 2	17	7	0.32	< 10	< 10	159	< 10	400
N114167	205	294	0.01	30	300	< 2	< 2	11	7	0.37	< 10	< 10	139	< 10	148
N114168	205	294	< 0.01	36	330	< 2	< 2	11	7	0.37	< 10	< 10	154	< 10	220
N114169	205	294	< 0.01	42	280	< 2	< 2	19	10	0.38	< 10	< 10	196	< 10	514
N114170	205	294	< 0.01	42	330	< 2	< 2	22	16	0.40	< 10	< 10	203	< 10	1405
N114171	205	294	< 0.01	35	340	< 2	< 2	15	9	0.38	< 10	< 10	200	< 10	774

CERTIFICATION: Rachel Handler

Chemex Labs Ltd.

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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 : ICE-IC97-68
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 13-OCT-97
Invoice No. : 19745813
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745813

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
N114185	205	226	< 0.2	3.33	< 2	120	< 0.5	< 2	1.86	2.5	28	65	1795	5.26	< 10	< 1	0.10	< 10	1.84	660	< 1
N114186	205	226	< 0.2	3.24	6	500	< 0.5	< 2	2.05	2.0	28	64	1375	4.66	10	< 1	0.15	< 10	1.89	675	< 1
N114187	205	226	< 0.2	2.56	2	70	< 0.5	< 2	1.65	2.0	24	42	1300	4.28	< 10	< 1	0.13	< 10	1.51	530	< 1
N114188	205	226	< 0.2	3.32	< 2	60	< 0.5	< 2	1.65	4.0	37	85	2250	6.28	10	< 1	0.05	< 10	2.66	765	< 1
N114189	205	226	< 0.2	3.00	< 2	30	< 0.5	< 2	1.43	13.5	54	69	238	6.33	< 10	< 1	0.02	< 10	2.66	950	< 1
N114190	205	226	< 0.2	2.45	< 2	80	< 0.5	< 2	1.62	6.0	35	25	102	5.57	10	< 1	0.03	< 10	1.62	780	< 1

CERTIFICATION: Ian Bradley

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

Project : ICE-IC97-68
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Certificate Date: 13-OCT-97
Invoice No. : I9745813
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745813

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
N114185	205	226	0.02	32	260	< 2	< 2	14	10	0.32	< 10	< 10	126	< 10	108
N114186	205	226	0.01	34	200	< 2	< 2	10	11	0.28	< 10	< 10	100	< 10	90
N114187	205	226	0.01	30	280	< 2	< 2	9	7	0.33	< 10	< 10	109	< 10	96
N114188	205	226	0.01	39	320	< 2	< 2	19	17	0.43	< 10	< 10	131	< 10	294
N114189	205	226	0.01	40	400	< 2	< 2	15	24	0.50	< 10	< 10	141	< 10	700
N114190	205	226	0.01	30	560	< 2	< 2	6	16	0.49	< 10	< 10	153	< 10	374

CERTIFICATION:

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Analytical Chemists * Geochemists * Registered Assayers

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

o: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-74
Comments:

Page Number :1-A
Total Pages :1
Certificate Date: 11-OCT-97
Invoice No. :19745811
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745811

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
N114500	205	294	0.2	4.70	< 2	50	< 0.5	< 2	2.53	3.0	26	152	997	5.77	< 10	< 1	0.04	< 10	2.59	360	< 1
N114556	205	294	0.6	4.68	< 2	50	< 0.5	< 2	2.22	4.5	30	199	1685	6.37	< 10	< 1	< 0.01	< 10	2.81	340	< 1
N114557	205	294	< 0.2	4.00	< 2	60	< 0.5	< 2	2.31	2.0	31	154	732	4.85	< 10	< 1	< 0.01	< 10	2.42	415	< 1
N114558	205	294	< 0.2	4.90	< 2	60	< 0.5	< 2	3.06	3.5	34	146	1190	5.43	< 10	< 1	0.06	< 10	2.46	645	< 1
N114559	205	294	< 0.2	4.27	< 2	210	< 0.5	< 2	2.89	2.5	38	119	1200	4.56	< 10	< 1	0.06	< 10	2.28	805	< 1
N114560	205	294	< 0.2	4.90	< 2	80	< 0.5	< 2	3.51	3.5	34	141	1135	4.86	< 10	< 1	< 0.01	< 10	2.50	845	< 1
N114561	205	294	< 0.2	4.67	< 2	60	< 0.5	< 2	3.43	3.0	35	118	1280	4.66	< 10	< 1	< 0.01	< 10	2.31	815	< 1
N114562	205	294	< 0.2	3.50	< 2	220	< 0.5	< 2	2.06	3.0	48	132	1860	6.15	< 10	< 1	0.01	< 10	2.09	560	< 1
N114563	205	294	< 0.2	3.74	< 2	50	< 0.5	< 2	0.81	0.5	38	161	1675	6.83	< 10	< 1	0.11	< 10	3.18	520	< 1
N114564	205	294	< 0.2	3.99	< 2	40	< 0.5	< 2	1.14	1.5	51	180	2870	7.64	< 10	< 1	0.01	< 10	3.39	555	< 1
N114565	205	294	< 0.2	4.48	< 2	80	< 0.5	< 2	1.13	1.5	56	185	1910	9.35	< 10	< 1	0.10	< 10	3.57	555	< 1
N114566	205	294	< 0.2	4.75	< 2	30	< 0.5	< 2	1.28	1.5	43	204	1970	8.92	< 10	< 1	0.05	< 10	3.75	580	< 1
N114567	205	294	1.2	4.37	< 2	30	< 0.5	< 2	1.87	1.5	40	132	5020	7.62	< 10	< 1	0.01	< 10	3.07	585	< 1
N114568	205	294	< 0.2	4.01	< 2	40	< 0.5	< 2	2.47	0.5	36	84	530	4.67	< 10	< 1	0.01	< 10	2.39	635	< 1
N114569	205	294	< 0.2	4.05	< 2	80	< 0.5	< 2	2.90	0.5	24	58	171	4.15	< 10	< 1	0.12	< 10	2.25	695	< 1
N114570	205	294	0.2	3.63	< 2	40	< 0.5	< 2	1.94	3.0	43	84	1950	4.97	< 10	< 1	0.08	< 10	2.39	820	< 1
N114571	205	294	< 0.2	3.23	< 2	90	< 0.5	< 2	1.39	< 0.5	43	61	927	7.77	10	< 1	< 0.01	< 10	2.98	950	< 1
N114572	205	294	< 0.2	2.92	< 2	180	< 0.5	< 2	2.50	< 0.5	32	50	157	6.67	< 10	< 1	< 0.01	< 10	2.64	935	< 1

CERTIFICATION: Stan Bucklen

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

Project : ICE-IC97-74
Comments:

Page er : 1-B
Total Pages : 1
Certificate Date: 11-OCT-97
Invoice No. : I9745811
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745811

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
N114500	205	294	< 0.01	62	200	< 2	< 2	16	11	0.25	< 10	< 10	132	< 10	470
N114556	205	294	< 0.01	64	180	< 2	< 2	20	7	0.23	< 10	< 10	151	< 10	638
N114557	205	294	< 0.01	63	210	< 2	< 2	13	6	0.28	< 10	< 10	111	< 10	564
N114558	205	294	< 0.01	60	200	< 2	2	15	9	0.25	< 10	< 10	127	< 10	308
N114559	205	294	< 0.01	61	190	< 2	< 2	11	15	0.25	< 10	< 10	107	< 10	284
N114560	205	294	< 0.01	67	220	< 2	< 2	11	11	0.26	< 10	< 10	108	< 10	184
N114561	205	294	< 0.01	63	220	< 2	< 2	11	9	0.26	< 10	< 10	108	< 10	220
N114562	205	294	< 0.01	56	190	< 2	< 2	12	13	0.22	< 10	< 10	108	< 10	418
N114563	205	294	< 0.01	61	160	< 2	< 2	12	6	0.22	< 10	< 10	112	< 10	296
N114564	205	294	< 0.01	65	150	< 2	< 2	12	4	0.23	< 10	< 10	132	< 10	384
N114565	205	294	< 0.01	61	160	< 2	< 2	16	7	0.25	< 10	< 10	144	< 10	386
N114566	205	294	< 0.01	65	160	< 2	< 2	16	4	0.26	< 10	< 10	150	< 10	238
N114567	205	294	< 0.01	65	200	< 2	< 2	9	11	0.23	< 10	< 10	117	< 10	492
N114568	205	294	< 0.01	59	210	< 2	< 2	7	7	0.24	< 10	< 10	101	< 10	504
N114569	205	294	< 0.01	56	190	< 2	< 2	7	8	0.23	< 10	< 10	93	< 10	430
N114570	205	294	< 0.01	62	200	< 2	< 2	9	6	0.26	< 10	< 10	109	< 10	1250
N114571	205	294	< 0.01	40	290	< 2	< 2	8	32	0.40	< 10	< 10	127	< 10	502
N114572	205	294	< 0.01	33	340	< 2	< 2	8	17	0.39	< 10	< 10	160	< 10	210

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

o: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-73
Comments:

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Invoice No. : 19745810
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745810

SAMPLE	PREP CODE		Cu %	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
N114287	208	294	8.43	41.0	< 0.01	38	< 10	< 0.5	Intf*	0.01	54.0	671	15	>10000	>15.00	< 10	10	< 0.01	< 10	< 0.01	30
N114288	208	294	0.77	1.0	5.24	10	70	< 0.5	< 2	0.45	1.0	78	175	6630	6.54	10	< 1	0.11	< 10	1.11	255
N114289	208	294	1.30	< 0.2	3.54	10	90	< 0.5	Intf*	0.60	5.5	75	101	>10000	9.40	< 10	< 1	0.16	< 10	1.19	485
N114290	208	294	0.44	< 0.2	3.78	< 2	210	< 0.5	< 2	2.83	7.0	44	117	3900	4.97	< 10	< 1	0.08	< 10	2.11	725
N114291	208	294	0.24	< 0.2	4.08	< 2	90	< 0.5	< 2	3.66	2.5	32	128	2050	4.14	10	< 1	0.02	< 10	2.19	865
N114292	208	294	0.01	< 0.2	4.14	< 2	120	< 0.5	< 2	3.65	< 0.5	25	109	155	4.19	10	< 1	0.05	< 10	2.34	980
N114293	208	294	0.03	< 0.2	3.72	4	100	< 0.5	< 2	2.62	< 0.5	27	115	346	4.86	10	< 1	0.03	< 10	2.60	955

CERTIFICATION: Ian Pochler

*INTERFERENCE: Cu ON Bi AND P.

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

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

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Comments:

Certificate Date: 15-OCT-97
Invoice No. : I9745810
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9745810

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N114287	208	294	19	< 0.01	4	Intf*	40	< 2	< 1	< 1	< 0.01	10	10	< 1	< 10	>10000
N114288	208	294	1	< 0.01	39	110	12	< 2	20	13	0.06	< 10	< 10	115	< 10	472
N114289	208	294	< 1	0.01	46	Intf*	< 2	< 2	17	16	< 0.01	< 10	< 10	77	< 10	2410
N114290	208	294	< 1	0.02	65	210	< 2	< 2	11	31	0.24	< 10	< 10	100	< 10	798
N114291	208	294	< 1	0.03	65	210	< 2	< 2	11	13	0.24	< 10	< 10	114	< 10	342
N114292	208	294	< 1	0.04	62	210	< 2	< 2	7	13	0.26	< 10	< 10	106	< 10	86
N114293	208	294	< 1	0.02	54	260	2	2	8	34	0.31	< 10	< 10	116	< 10	140

CERTIFICATION: Ian Pritchard

*INTERFERENCE: Cu ON Bi AND P.

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

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CERTIFICATE OF ANALYSIS A9745809

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
N114284	205	294	< 0.2	2.80	10	220	0.5	< 2	6.26	4.0	110	47	2310	10.25	10	< 1	0.07	< 10	0.98	1350	< 1
N114285	205	294	< 0.2	4.45	8	80	< 0.5	< 2	0.60	3.0	32	91	3810	11.45	30	< 1	0.04	< 10	1.30	455	< 1
N114286	205	294	>100.0	0.01	46	90	< 0.5	2	0.15	< 0.5	61	89	2590	10.40	< 10	9	< 0.01	< 10	0.01	20	77
N114294	205	294	< 0.2	2.63	< 2	320	< 0.5	< 2	2.57	< 0.5	26	70	416	5.31	10	< 1	< 0.01	< 10	2.00	850	< 1
N114295	205	294	< 0.2	2.63	< 2	50	< 0.5	< 2	2.14	< 0.5	24	40	66	5.99	10	< 1	< 0.01	< 10	1.92	695	< 1

CERTIFICATION: Ian Brown

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

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CERTIFICATE OF ANALYSIS A9745809

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
N114284	205	294	< 0.01	44	460	4	< 2	26	11	0.01	< 10	< 10	197	< 10	1625
N114285	205	294	0.02	25	610	6	< 2	28	13	< 0.01	< 10	< 10	325	< 10	1035
N114286	205	294	< 0.01	< 1	10	42	2	< 1	8	< 0.01	< 10	< 10	6	< 10	198
N114294	205	294	0.03	29	440	< 2	< 2	10	26	0.35	< 10	< 10	154	< 10	136
N114295	205	294	0.01	24	640	2	< 2	7	9	0.34	< 10	< 10	122	< 10	112

CERTIFICATION: Ian Bradley

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

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

Project : ICE-IC97-74
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Invoice No. :I9745808
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CERTIFICATE OF ANALYSIS A9745808

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
N114329	205	294	1.4	2.09	< 2	310	< 0.5	< 2	0.26	< 0.5	16	200	2100	>15.00	< 10	< 1	0.10	< 10	0.57	65	< 1
N114330	205	294	0.6	3.82	< 2	220	< 0.5	< 2	0.45	< 0.5	13	225	2140	13.35	< 10	< 1	0.07	< 10	1.53	115	< 1
N114331	205	294	0.2	3.49	< 2	150	< 0.5	< 2	0.32	< 0.5	14	222	2630	14.30	< 10	< 1	0.10	< 10	1.33	125	< 1
N114332	205	294	< 0.2	4.05	< 2	550	< 0.5	< 2	0.19	< 0.5	13	214	1630	10.10	< 10	< 1	0.08	< 10	1.76	160	< 1
N114333	205	294	0.2	4.86	< 2	100	< 0.5	< 2	0.11	< 0.5	57	216	2110	13.15	< 10	< 1	0.05	< 10	2.17	220	< 1
N114334	205	294	< 0.2	5.42	< 2	110	< 0.5	< 2	0.07	< 0.5	74	213	2790	13.60	< 10	< 1	0.04	< 10	2.89	310	< 1
N114335	205	294	< 0.2	5.32	< 2	60	< 0.5	< 2	0.36	< 0.5	51	215	2130	10.25	< 10	< 1	0.07	< 10	3.45	360	< 1
N114336	205	294	0.2	4.81	< 2	80	< 0.5	< 2	0.66	< 0.5	41	182	3250	9.55	< 10	< 1	0.08	< 10	3.31	375	< 1
N114337	205	294	< 0.2	4.54	< 2	40	< 0.5	< 2	1.86	1.5	30	158	2110	6.66	< 10	< 1	0.03	< 10	2.95	390	< 1

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

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

Project : ICE-IC97-74
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Certificate Date: 11-OCT-97
Invoice No. : I9745808
P.O. Number :
Account : MPO

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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
N114329	205	294	< 0.01	6	120	< 2	< 2	10	8	0.07	< 10	< 10	120	< 10	210
N114330	205	294	< 0.01	16	70	< 2	< 2	15	8	0.09	< 10	< 10	141	< 10	124
N114331	205	294	< 0.01	19	70	< 2	< 2	16	7	0.10	< 10	< 10	145	< 10	148
N114332	205	294	< 0.01	30	70	< 2	< 2	18	7	0.11	< 10	< 10	131	< 10	170
N114333	205	294	< 0.01	32	110	< 2	< 2	21	4	0.15	< 10	< 10	164	< 10	116
N114334	205	294	< 0.01	39	130	< 2	2	22	4	0.12	< 10	< 10	164	< 10	176
N114335	205	294	< 0.01	47	120	< 2	< 2	21	4	0.19	< 10	< 10	167	< 10	214
N114336	205	294	< 0.01	49	110	< 2	< 2	16	7	0.18	< 10	< 10	147	< 10	308
N114337	205	294	< 0.01	59	170	< 2	< 2	15	6	0.22	< 10	< 10	124	< 10	464

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PHONE: 604-984-0221 FAX: 604-984-0218

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

Project : ICE-ICE97-72
Comments:

Certificate Date: 11-OCT-97
Invoice No. : I9745806
P.O. Number :
Account :MPO

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CERTIFICATE OF ANALYSIS A9745806

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
N114272	205	294	< 0.2	3.07	< 2	90	< 0.5	< 2	1.43	< 0.5	23	37	813	5.91	< 10	< 1	< 0.01	< 10	2.23	800	< 1
N114273	205	294	< 0.2	3.29	< 2	120	< 0.5	< 2	2.10	0.5	24	29	890	5.58	< 10	< 1	< 0.01	< 10	2.00	825	< 1
N114274	205	294	< 0.2	3.23	< 2	90	< 0.5	< 2	1.85	< 0.5	28	24	115	5.73	< 10	< 1	< 0.01	< 10	2.15	890	< 1
N114275	205	294	< 0.2	2.89	< 2	60	< 0.5	< 2	1.56	< 0.5	29	19	462	5.58	< 10	< 1	< 0.01	< 10	2.19	850	< 1
N114276	205	294	< 0.2	3.55	< 2	170	< 0.5	< 2	1.20	< 0.5	28	49	3700	6.59	< 10	< 1	< 0.01	< 10	3.06	1015	< 1
N114277	205	294	< 0.2	4.75	< 2	140	< 0.5	< 2	0.94	< 0.5	37	79	4490	8.20	10	< 1	< 0.01	< 10	3.83	1340	< 1
N114278	205	294	< 0.2	5.10	< 2	480	< 0.5	Intf*	0.18	< 0.5	40	98	>10000	9.18	< 10	1	0.04	< 10	3.28	1000	< 1
N114279	205	294	< 0.2	0.74	2	410	< 0.5	< 2	0.04	< 0.5	9	24	2040	2.63	< 10	< 1	0.16	< 10	0.16	70	< 1
N114280	205	294	< 0.2	0.62	< 2	410	< 0.5	< 2	0.04	< 0.5	6	17	1660	2.12	< 10	< 1	0.17	< 10	0.17	70	< 1
N114281	205	294	< 0.2	0.89	< 2	620	< 0.5	< 2	0.03	< 0.5	15	22	2570	3.23	< 10	< 1	0.14	< 10	0.27	120	< 1
N114282	205	294	< 0.2	0.55	2	500	< 0.5	< 2	0.03	< 0.5	4	26	1745	2.83	< 10	< 1	0.15	< 10	0.09	40	< 1
N114283	205	294	< 0.2	0.86	2	470	< 0.5	< 2	0.03	< 0.5	5	31	1770	1.93	< 10	< 1	0.16	10	0.17	110	< 1

CERTIFICATION: Ian Pendleton

*INTERFERENCE: Cu ON Bi AND P.

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

Project : ICE-ICE97-72
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Account :MPO

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CERTIFICATE OF ANALYSIS A9745806

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
N114272	205	294	< 0.01	26	310	< 2	< 2	9	67	0.44	< 10	< 10	146	< 10	164
N114273	205	294	< 0.01	22	310	< 2	< 2	6	17	0.37	< 10	< 10	146	< 10	146
N114274	205	294	< 0.01	25	380	< 2	< 2	4	12	0.43	< 10	< 10	149	< 10	112
N114275	205	294	< 0.01	23	420	< 2	< 2	6	9	0.42	< 10	< 10	155	< 10	144
N114276	205	294	< 0.01	30	340	< 2	< 2	15	6	0.42	< 10	< 10	191	< 10	200
N114277	205	294	< 0.01	39	340	< 2	< 2	25	5	0.38	< 10	< 10	231	< 10	196
N114278	205	294	< 0.01	45	Intf*	< 2	< 2	25	5	0.10	< 10	< 10	191	< 10	244
N114279	205	294	< 0.01	10	140	2	< 2	6	3	< 0.01	< 10	< 10	24	< 10	156
N114280	205	294	< 0.01	8	120	4	< 2	4	4	< 0.01	< 10	< 10	22	< 10	110
N114281	205	294	< 0.01	16	150	6	< 2	4	3	< 0.01	< 10	< 10	37	< 10	220
N114282	205	294	< 0.01	7	180	6	< 2	4	2	< 0.01	< 10	< 10	27	< 10	92
N114283	205	294	< 0.01	10	130	6	< 2	4	3	< 0.01	< 10	< 10	26	< 10	88

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-66
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CERTIFICATE OF ANALYSIS A9745805

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
N114179	205	294	< 0.2	3.16	< 2	240	< 0.5	< 2	1.48	2.5	31	68	3280	7.12	< 10	< 1	0.04	< 10	1.95	585	< 1
N114180	205	294	< 0.2	2.88	< 2	60	< 0.5	< 2	0.90	< 0.5	36	90	2480	6.12	< 10	< 1	< 0.01	< 10	2.61	625	< 1
N114181	205	294	< 0.2	3.62	< 2	40	< 0.5	< 2	1.45	4.0	35	79	4120	6.88	< 10	< 1	< 0.01	< 10	2.94	760	< 1
N114182	205	294	< 0.2	3.17	< 2	140	< 0.5	< 2	1.16	2.5	58	82	7170	7.71	< 10	< 1	< 0.01	< 10	2.91	810	< 1
N114183	205	294	< 0.2	2.20	< 2	30	< 0.5	< 2	1.31	1.0	49	57	538	5.39	< 10	< 1	< 0.01	< 10	1.82	820	< 1
N114184	205	294	< 0.2	2.88	< 2	40	< 0.5	< 2	2.71	0.5	38	24	299	6.59	< 10	< 1	< 0.01	< 10	1.67	850	< 1

CERTIFICATION: Ian Bradley

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

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CERTIFICATE OF ANALYSIS A9745805

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
N114179	205	294	< 0.01	32	300	< 2	< 2	18	9	0.31	< 10	< 10	138	< 10	210
N114180	205	294	< 0.01	44	300	< 2	< 2	12	17	0.47	< 10	< 10	91	< 10	184
N114181	205	294	< 0.01	38	380	< 2	< 2	19	11	0.45	< 10	< 10	159	< 10	208
N114182	205	294	< 0.01	42	300	< 2	< 2	18	21	0.46	< 10	< 10	141	< 10	576
N114183	205	294	< 0.01	41	390	< 2	< 2	7	36	0.52	< 10	< 10	118	< 10	440
N114184	205	294	< 0.01	29	420	< 2	< 2	7	11	0.51	< 10	< 10	166	< 10	270

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

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

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Invoice No. :19745800
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745800

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
BB11946	201	202	< 0.2	1.62	6	480	< 0.5	< 2	0.64	0.5	11	28	253	2.95	< 10	< 1	0.09	10	0.68	450	1
BB11947	201	202	< 0.2	1.91	4	380	< 0.5	< 2	0.93	0.5	18	30	263	3.39	< 10	< 1	0.09	10	0.78	820	< 1
BB11948	201	202	< 0.2	2.30	6	400	< 0.5	< 2	0.80	0.5	25	40	655	4.86	< 10	< 1	0.08	< 10	0.94	775	3
BB11949	201	202	0.2	2.53	6	360	< 0.5	< 2	0.72	1.0	33	52	1735	6.61	< 10	< 1	0.07	< 10	1.32	1100	3
BB11950	201	202	< 0.2	2.53	6	430	< 0.5	< 2	0.47	1.0	27	51	1230	5.95	< 10	< 1	0.08	< 10	0.94	565	4
BB11951	201	202	< 0.2	2.08	2	410	< 0.5	< 2	0.42	0.5	16	42	625	4.87	< 10	< 1	0.06	< 10	0.70	270	1
BB11952	201	202	< 0.2	1.60	2	430	< 0.5	< 2	0.92	0.5	11	30	385	2.94	< 10	< 1	0.08	10	0.73	440	1
BB11953	201	202	< 0.2	1.62	8	430	< 0.5	< 2	0.81	0.5	14	28	183	3.11	< 10	< 1	0.08	10	0.80	590	1
BB11954	201	202	< 0.2	1.55	6	350	< 0.5	< 2	0.86	0.5	14	28	258	3.17	< 10	< 1	0.10	10	0.74	565	< 1
BB11955	201	202	< 0.2	1.97	12	510	0.5	< 2	0.59	0.5	16	34	217	3.60	< 10	< 1	0.09	10	0.83	725	< 1
BB11956	201	202	< 0.2	1.85	10	200	< 0.5	< 2	0.29	1.0	14	34	115	4.91	10	1	0.07	10	0.55	455	1
BB11957	201	202	< 0.2	2.18	6	440	< 0.5	< 2	0.47	0.5	19	37	233	4.00	< 10	< 1	0.11	10	0.82	755	4

CERTIFICATION: Ivan Bonham

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 : ICE
Comments:

Certificate Date: 12-OCT-97
Invoice No. :19745800
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745800

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
BB11946	201	202	< 0.01	23	500	14	< 2	8	23	0.07	< 10	< 10	66	< 10	94
BB11947	201	202	< 0.01	24	400	8	< 2	9	22	0.12	< 10	< 10	94	< 10	112
BB11948	201	202	< 0.01	30	410	10	< 2	10	22	0.12	< 10	< 10	111	< 10	128
BB11949	201	202	< 0.01	35	650	8	< 2	16	20	0.12	< 10	< 10	140	< 10	174
BB11950	201	202	< 0.01	30	450	14	< 2	8	15	0.10	< 10	< 10	129	< 10	158
BB11951	201	202	< 0.01	21	380	10	< 2	6	16	0.07	< 10	< 10	110	< 10	140
BB11952	201	202	< 0.01	27	640	6	< 2	8	36	0.06	< 10	< 10	64	< 10	114
BB11953	201	202	< 0.01	25	690	12	< 2	6	33	0.09	< 10	< 10	73	< 10	110
BB11954	201	202	< 0.01	24	640	8	< 2	7	31	0.08	< 10	< 10	77	< 10	102
BB11955	201	202	< 0.01	35	490	12	< 2	8	23	0.09	< 10	< 10	80	< 10	98
BB11956	201	202	< 0.01	18	660	12	< 2	4	13	0.08	< 10	< 10	120	< 10	142
BB11957	201	202	< 0.01	32	500	10	< 2	5	19	0.08	< 10	< 10	89	< 10	128

CERTIFICATION:

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-83
Comments:

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Certificate Date: 12-OCT-97
Invoice No. :I9745796
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745796

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
N114474	205	294	< 0.2	5.42	< 2	150	< 0.5	< 2	1.49	7.5	54	147	2180	9.61	10	< 1	< 0.01	< 10	4.34	800	< 1
N114475	205	294	< 0.2	4.11	2	90	< 0.5	< 2	2.43	6.0	42	171	1225	6.15	10	< 1	0.01	< 10	2.89	620	< 1
N114476	205	294	< 0.2	3.64	4	70	< 0.5	< 2	1.75	3.5	32	164	672	5.00	10	1	0.01	< 10	2.91	645	< 1
N114477	205	294	< 0.2	4.22	2	120	< 0.5	< 2	2.16	6.0	31	148	1370	5.65	10	< 1	0.03	< 10	2.93	715	< 1
N114478	205	294	< 0.2	4.18	2	120	< 0.5	< 2	2.82	5.5	29	140	1155	4.94	10	< 1	0.02	< 10	2.54	645	< 1
N114479	205	294	< 0.2	3.88	2	280	< 0.5	< 2	1.83	4.5	37	167	1385	6.13	10	< 1	< 0.01	< 10	3.04	710	< 1
N114480	205	294	< 0.2	4.14	< 2	110	< 0.5	< 2	2.40	3.5	30	155	1335	5.23	10	< 1	0.04	< 10	2.88	715	< 1
N114481	205	294	< 0.2	4.39	< 2	60	< 0.5	< 2	3.70	1.5	29	85	839	4.18	10	< 1	0.05	< 10	2.25	755	< 1
N114482	205	294	< 0.2	3.71	2	50	< 0.5	< 2	2.85	2.0	39	121	962	4.44	10	< 1	0.05	< 10	2.52	775	< 1
N114483	205	294	< 0.2	3.85	2	60	< 0.5	< 2	2.31	2.5	44	136	1000	5.13	10	1	0.01	< 10	2.91	775	< 1
N114484	205	294	< 0.2	4.27	2	60	< 0.5	< 2	2.55	3.0	54	136	716	4.83	10	< 1	0.05	< 10	3.31	795	1
N114485	205	294	< 0.2	4.68	< 2	40	< 0.5	< 2	4.19	1.5	45	140	115	4.53	10	< 1	0.03	< 10	3.42	955	< 1
N114486	205	294	< 0.2	3.93	< 2	90	< 0.5	< 2	2.44	2.5	49	159	228	4.91	10	< 1	0.02	< 10	3.56	765	< 1
N114487	205	294	< 0.2	3.75	2	190	< 0.5	< 2	1.60	5.5	70	80	1365	8.31	20	< 1	< 0.01	< 10	3.12	880	< 1
N114488	205	294	< 0.2	3.12	2	130	< 0.5	< 2	1.58	4.5	67	71	1375	7.32	10	< 1	< 0.01	< 10	2.72	895	< 1
N114489	205	294	< 0.2	2.75	2	90	< 0.5	< 2	2.18	2.0	36	51	154	5.70	10	< 1	< 0.01	< 10	2.28	725	< 1
N114490	205	294	0.6	3.58	< 2	140	< 0.5	< 2	1.32	5.0	51	90	1010	7.10	10	< 1	< 0.01	< 10	3.24	905	< 1
N114491	205	294	0.4	3.25	< 2	120	< 0.5	< 2	1.05	3.0	50	75	1190	7.88	10	< 1	< 0.01	< 10	3.03	735	< 1
N114492	205	294	0.2	3.83	< 2	250	< 0.5	< 2	1.34	5.0	36	91	2090	7.52	10	< 1	< 0.01	< 10	3.13	620	< 1
N114493	205	294	1.4	4.06	< 2	20	< 0.5	Intf*	0.21	4.5	79	65	>10000	13.60	10	< 1	0.03	< 10	2.74	610	8
N114494	205	294	< 0.2	2.62	< 2	90	< 0.5	< 2	1.13	8.0	52	20	1245	7.74	10	< 1	0.04	< 10	1.73	830	< 1
N114495	205	294	0.2	4.01	< 2	140	< 0.5	< 2	0.68	8.0	54	101	1695	9.94	20	< 1	0.01	< 10	3.20	885	1
N114496	205	294	0.2	3.97	< 2	20	< 0.5	< 2	0.17	8.0	57	122	632	9.59	10	< 1	0.01	< 10	2.99	865	< 1
N114497	205	294	0.2	3.91	2	80	< 0.5	< 2	0.77	6.5	50	95	471	8.71	10	< 1	0.04	< 10	3.31	905	< 1
N114498	205	294	< 0.2	1.71	< 2	100	< 0.5	< 2	4.61	13.5	354	46	469	13.35	10	< 1	0.05	< 10	2.63	3100	< 1
N114499	205	294	< 0.2	4.33	2	430	< 0.5	< 2	1.84	0.5	50	125	101	8.36	10	< 1	0.06	< 10	3.16	1030	< 1

CERTIFICATION: Ian Bucklen

* INTERFERENCES: Cu on Bi and P

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 : ICE-IC97-83
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 12-OCT-97
Invoice No. : 19745796
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745796

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
N114474	205	294	< 0.01	49	280	< 2	< 2	18	10	0.29	< 10	< 10	184	< 10	1800
N114475	205	294	0.01	60	250	< 2	< 2	12	9	0.22	< 10	< 10	123	< 10	630
N114476	205	294	0.01	58	250	< 2	< 2	10	5	0.19	< 10	< 10	100	< 10	296
N114477	205	294	0.01	57	240	< 2	< 2	11	7	0.20	< 10	< 10	115	< 10	332
N114478	205	294	0.01	56	220	< 2	< 2	12	7	0.23	< 10	< 10	124	< 10	318
N114479	205	294	0.01	63	280	< 2	< 2	13	9	0.25	< 10	< 10	119	< 10	574
N114480	205	294	0.01	49	230	< 2	< 2	12	17	0.26	< 10	< 10	121	< 10	326
N114481	205	294	0.01	55	220	< 2	< 2	6	9	0.24	< 10	< 10	104	< 10	236
N114482	205	294	0.01	61	230	< 2	< 2	6	10	0.25	< 10	< 10	104	< 10	424
N114483	205	294	0.01	45	340	< 2	< 2	9	8	0.25	< 10	< 10	120	< 10	750
N114484	205	294	< 0.01	50	300	< 2	< 2	10	9	0.25	< 10	< 10	115	< 10	890
N114485	205	294	0.01	49	300	< 2	< 2	10	12	0.23	< 10	< 10	125	< 10	278
N114486	205	294	0.01	52	330	< 2	< 2	11	9	0.21	< 10	< 10	110	< 10	484
N114487	205	294	< 0.01	42	360	2	2	14	35	0.42	< 10	< 10	177	< 10	1270
N114488	205	294	< 0.01	40	400	< 2	< 2	11	10	0.38	< 10	< 10	164	< 10	1160
N114489	205	294	< 0.01	33	390	< 2	< 2	6	10	0.35	< 10	< 10	154	< 10	280
N114490	205	294	< 0.01	41	330	< 2	< 2	9	11	0.30	< 10	< 10	156	< 10	1000
N114491	205	294	< 0.01	37	330	2	< 2	10	9	0.30	< 10	< 10	162	< 10	668
N114492	205	294	< 0.01	34	300	< 2	2	11	9	0.28	< 10	< 10	171	< 10	646
N114493	205	294	< 0.01	28	Intf*	< 2	< 2	13	10	0.10	< 10	< 10	174	< 10	1050
N114494	205	294	< 0.01	9	350	< 2	< 2	13	15	0.31	< 10	< 10	223	< 10	1230
N114495	205	294	< 0.01	38	270	2	2	16	12	0.25	< 10	< 10	188	< 10	2340
N114496	205	294	0.01	34	290	8	< 2	17	1	< 0.01	< 10	< 10	169	< 10	2200
N114497	205	294	< 0.01	40	320	< 2	2	15	7	0.23	< 10	< 10	183	< 10	2410
N114498	205	294	< 0.01	45	140	< 2	< 2	12	48	< 0.01	< 10	< 10	90	< 10	4740
N114499	205	294	0.01	51	320	< 2	< 2	26	25	0.04	< 10	< 10	227	< 10	214

CERTIFICATION: Ian Bradley

* INTERFERENCES: Cu on Bi and P

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 : ICE-IC97-65
Comments:

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Certificate Date: 13-OCT-97
Invoice No. : 19745794
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745794

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
N114172	205	294	55.4	0.96	6	230	< 0.5	< 2	0.50	0.5	12	110	590	3.01	< 10	10	0.03	< 10	0.52	310	1
N114173	205	294	9.2	1.51	4	150	< 0.5	< 2	0.58	1.5	17	52	927	5.26	10	< 1	0.04	< 10	0.84	370	1
N114174	205	294	0.8	2.99	< 2	130	< 0.5	< 2	1.40	4.0	23	158	1405	7.10	< 10	< 1	0.14	< 10	1.72	395	< 1
N114175	205	294	< 0.2	3.57	10	230	< 0.5	< 2	1.22	4.5	31	191	2500	10.60	10	< 1	0.10	< 10	2.01	595	1
N114176	205	294	< 0.2	4.22	< 2	110	< 0.5	< 2	2.10	13.5	52	186	2300	7.30	< 10	< 1	0.05	< 10	3.47	1195	< 1
N114177	205	294	< 0.2	3.18	4	100	< 0.5	< 2	2.14	1.5	42	81	506	4.38	< 10	< 1	0.11	< 10	2.37	1315	< 1
N114178	205	294	< 0.2	3.70	< 2	180	< 0.5	< 2	2.73	2.5	55	108	301	4.80	< 10	< 1	0.06	< 10	2.56	1560	< 1

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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CERTIFICATE OF ANALYSIS A9745794

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
N114172	205	294	0.04	8	160	2	< 2	6	16	0.17	< 10	< 10	73	< 10	218
N114173	205	294	0.02	14	210	4	< 2	9	20	0.23	< 10	< 10	117	< 10	314
N114174	205	294	0.07	44	230	< 2	< 2	15	43	0.20	< 10	< 10	111	< 10	370
N114175	205	294	0.05	40	230	4	< 2	17	30	0.18	< 10	< 10	132	< 10	764
N114176	205	294	0.03	58	280	< 2	< 2	20	30	0.23	< 10	< 10	125	< 10	1240
N114177	205	294	0.03	64	220	< 2	2	7	16	0.23	< 10	< 10	89	< 10	544
N114178	205	294	0.02	83	260	< 2	< 2	10	37	0.23	< 10	< 10	105	< 10	1430

CERTIFICATION:

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Y1A 3S9

Project : ICE-IC97-80
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Certificate Date: 12-OCT-97
Invoice No. : 19745792
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Account : MPO

CERTIFICATE OF ANALYSIS A9745792

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
N114405	205	294	< 0.2	2.55	4	220	< 0.5	< 2	0.82	11.5	294	62	1075	12.65	10	< 1	0.06	< 10	1.06	6060	< 1
N114406	205	294	< 0.2	3.08	6	130	< 0.5	< 2	0.86	9.5	180	112	1725	9.99	10	< 1	0.16	< 10	2.07	1685	< 1
N114407	205	294	< 0.2	3.11	2	350	< 0.5	< 2	0.50	6.0	172	91	137	9.96	10	< 1	0.14	< 10	1.89	1715	< 1
N114408	205	294	< 0.2	1.88	2	250	< 0.5	< 2	7.91	1.0	37	51	84	4.77	< 10	< 1	0.05	< 10	2.30	1760	< 1
N114409	205	294	< 0.2	3.40	2	100	< 0.5	< 2	5.55	1.0	38	107	83	6.34	10	< 1	0.07	< 10	2.19	1990	< 1
N114410	205	294	< 0.2	3.54	< 2	160	< 0.5	< 2	3.11	0.5	37	118	97	6.38	10	< 1	0.03	< 10	2.44	1030	< 1
N114411	205	294	< 0.2	1.49	2	240	< 0.5	< 2	12.50	1.5	25	38	39	4.80	10	< 1	0.07	< 10	4.53	2190	< 1
N114412	205	294	< 0.2	3.59	< 2	80	< 0.5	< 2	2.75	0.5	38	99	89	6.62	10	< 1	0.08	< 10	2.60	775	< 1
N114413	205	294	< 0.2	3.72	2	110	< 0.5	2	4.67	0.5	35	125	85	6.84	10	< 1	0.09	< 10	2.45	1440	< 1

CERTIFICATION: David Chamberlain

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

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CERTIFICATE OF ANALYSIS A9745792

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
N114405	205	294	0.01	103	320	< 2	< 2	23	10	0.03	< 10	< 10	155	< 10	1725
N114406	205	294	< 0.01	56	330	< 2	< 2	32	10	0.11	< 10	< 10	197	< 10	1750
N114407	205	294	0.01	55	390	< 2	< 2	30	8	< 0.01	< 10	< 10	183	< 10	1240
N114408	205	294	< 0.01	33	270	< 2	< 2	20	56	< 0.01	< 10	< 10	99	< 10	80
N114409	205	294	< 0.01	47	310	< 2	< 2	26	32	0.18	< 10	< 10	180	< 10	78
N114410	205	294	0.01	52	330	< 2	< 2	29	27	0.09	< 10	< 10	185	< 10	82
N114411	205	294	< 0.01	37	240	< 2	< 2	16	163	< 0.01	< 10	< 10	105	< 10	64
N114412	205	294	0.02	46	360	2	< 2	28	33	< 0.01	< 10	< 10	180	< 10	110
N114413	205	294	0.01	49	340	< 2	< 2	32	45	0.14	< 10	< 10	221	< 10	96

CERTIFICATION: Ivan Bridley

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 : ICE-IC97-84
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Invoice No. : 19745791
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9745791

SAMPLE	PREP CODE		Cu %	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
N114443	208	294	0.29	1.2	0.25	112	290	< 0.5	2	0.09	< 0.5	9	207	2500	12.50	20	< 1	0.07	< 10	0.08	45
N114444	208	294	0.48	2.6	< 0.01	26	< 10	< 0.5	< 2	0.01	1.0	552	81	4130	>15.00	< 10	1	< 0.01	< 10	0.01	15
N114445	208	294	1.92	7.4	< 0.01	32	< 10	< 0.5	Intf*	0.01	1.5	619	72	>10000	>15.00	< 10	< 1	< 0.01	< 10	< 0.01	20
N114446	208	294	2.67	9.2	< 0.01	30	< 10	< 0.5	Intf*	< 0.01	2.5	632	43	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01	10
N114447	208	294	2.33	9.8	< 0.01	26	< 10	< 0.5	Intf*	0.01	4.5	525	82	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01	35
N114448	208	294	2.84	9.4	< 0.01	36	< 10	< 0.5	Intf*	< 0.01	6.5	403	58	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01	30
N114449	208	294	6.16	19.6	< 0.01	36	< 10	< 0.5	Intf*	< 0.01	4.0	388	44	>10000	>15.00	< 10	3	< 0.01	< 10	< 0.01	25
N114450	208	294	8.40	27.8	< 0.01	40	< 10	< 0.5	Intf*	< 0.01	4.0	686	21	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01	25
N114451	208	294	0.70	2.4	0.23	38	40	< 0.5	18	0.04	0.5	80	70	6080	3.91	10	< 1	0.31	< 10	0.03	20
N114452	208	294	1.20	< 0.2	4.02	< 2	120	< 0.5	Intf*	2.06	10.5	47	150	>10000	5.06	10	< 1	0.07	< 10	2.05	480

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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

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

Project : ICE-IC97-84
Comments:

Certificate Date: 15-OCT-97
Invoice No. : I9745791
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9745791

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N114443	208	294	14	0.01	1	720	116	< 2	5	87	0.04	< 10	< 10	256	< 10	158
N114444	208	294	14	< 0.01	6	20	42	< 2	< 1	< 1	0.01	< 10	10	11	< 10	174
N114445	208	294	21	< 0.01	3	Intf*	26	< 2	< 1	< 1	< 0.01	< 10	10	6	< 10	268
N114446	208	294	17	< 0.01	9	Intf*	26	< 2	< 1	< 1	< 0.01	< 10	10	4	< 10	552
N114447	208	294	17	< 0.01	6	Intf*	28	< 2	< 1	< 1	< 0.01	< 10	10	4	< 10	1010
N114448	208	294	16	< 0.01	4	Intf*	36	< 2	< 1	< 1	< 0.01	10	10	4	< 10	1620
N114449	208	294	14	< 0.01	3	Intf*	40	< 2	< 1	< 1	< 0.01	< 10	10	< 1	< 10	986
N114450	208	294	21	< 0.01	2	Intf*	56	< 2	< 1	< 1	< 0.01	< 10	10	< 1	< 10	734
N114451	208	294	15	0.04	1	240	154	< 2	10	57	0.11	< 10	< 10	23	< 10	104
N114452	208	294	< 1	0.01	49	Intf*	< 2	< 2	17	12	0.15	< 10	< 10	117	< 10	764

CERTIFICATION: [illegible]

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

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

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CERTIFICATE OF ANALYSIS A9745790

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
N114434	205	294	< 0.2	3.54	< 2	180	< 0.5	< 2	3.16	< 0.5	32	68	84	6.15	< 10	< 1	0.03	< 10	2.05	1200	< 1
N114435	205	294	< 0.2	3.73	< 2	100	< 0.5	< 2	1.71	< 0.5	34	69	77	6.67	< 10	< 1	0.05	< 10	1.92	785	< 1
N114436	205	294	< 0.2	3.98	< 2	100	< 0.5	< 2	3.29	< 0.5	33	67	92	7.20	< 10	< 1	0.04	< 10	1.94	995	< 1
N114437	205	294	< 0.2	2.75	8	120	< 0.5	< 2	6.29	< 0.5	34	61	110	6.90	< 10	< 1	0.04	< 10	2.28	1005	< 1
N114438	205	294	< 0.2	2.65	< 2	150	< 0.5	< 2	5.21	< 0.5	34	55	81	6.08	< 10	< 1	0.11	< 10	2.56	910	< 1
N114439	205	294	< 0.2	2.61	< 2	120	< 0.5	< 2	5.47	< 0.5	61	53	58	7.08	< 10	< 1	0.07	< 10	3.14	1105	< 1
N114440	205	294	< 0.2	3.63	< 2	70	< 0.5	< 2	2.14	8.0	68	39	996	7.78	< 10	< 1	< 0.01	< 10	2.23	1170	< 1
N114441	205	294	< 0.2	3.43	< 2	110	< 0.5	< 2	1.87	7.0	48	30	5020	6.95	< 10	< 1	< 0.01	< 10	2.09	945	< 1
N114442	205	294	< 0.2	5.29	< 2	690	< 0.5	Intf*	0.77	4.5	44	122	>10000	10.45	10	< 1	< 0.01	< 10	1.48	530	< 1
N114553	205	294	< 0.2	3.87	< 2	190	< 0.5	< 2	2.40	6.5	73	158	3290	6.04	< 10	< 1	0.03	< 10	2.83	660	< 1
N114554	205	294	< 0.2	3.96	< 2	140	< 0.5	< 2	3.16	2.0	79	97	775	5.89	< 10	< 1	0.03	< 10	2.30	705	< 1
N114555	205	294	< 0.2	3.82	< 2	170	< 0.5	< 2	3.75	< 0.5	47	111	210	5.13	< 10	< 1	0.03	< 10	2.68	710	< 1

CERTIFICATION: Ian Sinclair

*INTERFERENCE: Cu ON Bi AND P.

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

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

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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
N114434	205	294	< 0.01	36	520	< 2	< 2	27	39	0.17	< 10	< 10	201	< 10	122
N114435	205	294	< 0.01	41	470	< 2	< 2	27	17	0.13	< 10	< 10	212	< 10	88
N114436	205	294	< 0.01	40	470	< 2	< 2	26	27	0.22	< 10	< 10	197	< 10	90
N114437	205	294	< 0.01	39	430	< 2	< 2	28	56	< 0.01	< 10	< 10	169	< 10	114
N114438	205	294	0.01	39	420	< 2	< 2	22	63	< 0.01	< 10	< 10	136	< 10	104
N114439	205	294	0.01	33	380	< 2	2	24	78	< 0.01	< 10	< 10	141	< 10	1555
N114440	205	294	< 0.01	33	410	< 2	< 2	18	30	0.41	< 10	< 10	189	< 10	2430
N114441	205	294	< 0.01	29	380	< 2	< 2	13	26	0.42	< 10	< 10	163	< 10	1775
N114442	205	294	< 0.01	20	Intf*	< 2	< 2	32	17	0.12	< 10	< 10	262	< 10	1220
N114553	205	294	< 0.01	55	260	< 2	< 2	12	14	0.25	< 10	< 10	111	< 10	1540
N114554	205	294	< 0.01	51	240	< 2	< 2	7	13	0.20	< 10	< 10	91	< 10	1300
N114555	205	294	< 0.01	53	210	< 2	< 2	8	15	0.20	< 10	< 10	94	< 10	474

CERTIFICATION: Ian Bucklen

*INTERFERENCE: Cu ON Bi AND P.

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

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

Project : ICE-IC97-61
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CERTIFICATE OF ANALYSIS A9745789

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
N114044	205	294	< 0.2	2.92	< 2	190	< 0.5	< 2	1.53	< 0.5	33	81	165	4.61	< 10	< 1	< 0.01	< 10	2.67	750	< 1
N114045	205	294	< 0.2	3.16	< 2	120	< 0.5	< 2	2.13	< 0.5	28	61	214	4.94	< 10	< 1	0.01	< 10	2.21	685	< 1
N114046	205	294	< 0.2	3.30	< 2	90	< 0.5	< 2	1.46	< 0.5	37	76	733	5.60	< 10	< 1	0.04	< 10	2.82	940	< 1
N114047	205	294	< 0.2	3.15	< 2	80	< 0.5	< 2	2.08	< 0.5	31	51	346	4.81	< 10	< 1	0.01	< 10	2.51	770	< 1
N114048	205	294	< 0.2	3.71	< 2	520	< 0.5	< 2	2.30	< 0.5	36	72	644	5.63	10	< 1	0.02	< 10	2.75	860	< 1
N114049	205	294	< 0.2	3.00	< 2	110	< 0.5	< 2	1.71	< 0.5	35	79	366	4.92	< 10	< 1	< 0.01	< 10	2.62	835	< 1
N114050	205	294	< 0.2	3.11	< 2	60	< 0.5	< 2	1.87	< 0.5	33	60	156	4.84	< 10	< 1	0.01	< 10	2.53	820	< 1
N114051	205	294	< 0.2	3.21	< 2	70	< 0.5	< 2	2.18	< 0.5	32	47	74	4.62	< 10	< 1	0.04	< 10	2.37	800	< 1
N114052	205	294	< 0.2	3.26	< 2	50	< 0.5	< 2	2.22	< 0.5	37	55	94	5.09	< 10	< 1	0.03	< 10	2.18	835	< 1
N114053	205	294	< 0.2	3.52	< 2	210	< 0.5	< 2	2.55	< 0.5	38	64	96	5.03	< 10	< 1	0.06	< 10	2.27	975	< 1

CERTIFICATION: Ian Pitcher

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Analytical Chemists * Geochemists * Registered Assayers

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

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

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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
N114044	205	294	< 0.01	38	270	< 2	< 2	8	17	0.39	< 10	< 10	110	< 10	142
N114045	205	294	< 0.01	34	340	< 2	< 2	6	7	0.30	< 10	< 10	130	< 10	104
N114046	205	294	< 0.01	37	300	< 2	2	10	9	0.33	< 10	< 10	123	< 10	282
N114047	205	294	< 0.01	34	310	< 2	< 2	7	14	0.39	< 10	< 10	125	< 10	130
N114048	205	294	< 0.01	37	330	< 2	< 2	11	8	0.41	< 10	< 10	153	< 10	192
N114049	205	294	< 0.01	39	300	< 2	< 2	8	10	0.39	< 10	< 10	121	< 10	178
N114050	205	294	< 0.01	32	310	< 2	< 2	7	6	0.36	< 10	< 10	131	< 10	140
N114051	205	294	< 0.01	29	300	< 2	< 2	6	6	0.28	< 10	< 10	133	< 10	114
N114052	205	294	< 0.01	34	320	< 2	< 2	7	8	0.29	< 10	< 10	136	< 10	186
N114053	205	294	< 0.01	38	280	< 2	< 2	9	9	0.26	< 10	< 10	126	< 10	176

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

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

Project : ICE-IC97-69
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CERTIFICATE OF ANALYSIS A9745788

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
N114191	205	294	< 0.2	3.85	< 2	190	< 0.5	< 2	0.38	< 0.5	13	121	2330	8.81	< 10	< 1	0.07	< 10	0.94	110	< 1
N114192	205	294	< 0.2	4.22	< 2	130	< 0.5	< 2	0.79	< 0.5	10	133	2410	8.99	< 10	< 1	0.02	< 10	1.14	165	< 1
N114193	205	294	< 0.2	2.86	< 2	120	< 0.5	< 2	1.49	0.5	8	119	2200	9.53	10	< 1	0.03	< 10	0.89	190	< 1
N114194	205	294	< 0.2	3.42	< 2	130	< 0.5	< 2	1.57	0.5	16	87	3080	8.60	10	< 1	< 0.01	< 10	1.53	420	< 1
N114195	205	294	< 0.2	2.98	< 2	250	< 0.5	< 2	1.19	0.5	10	114	3320	11.10	10	< 1	< 0.01	< 10	1.36	370	< 1
N114196	205	294	0.6	4.04	< 2	110	< 0.5	< 2	0.58	< 0.5	14	234	3730	8.48	< 10	2	< 0.01	< 10	2.22	555	< 1
N114197	205	294	< 0.2	4.71	< 2	80	< 0.5	< 2	1.08	3.0	23	166	5330	8.03	< 10	2	< 0.01	< 10	2.75	865	< 1
N114198	205	294	< 0.2	3.09	< 2	130	< 0.5	< 2	1.09	1.0	23	156	4260	4.87	< 10	< 1	< 0.01	< 10	2.04	530	< 1
N114199	205	294	< 0.2	5.65	12	110	< 0.5	Intf*	0.34	< 0.5	21	201	>10000	6.05	< 10	< 1	0.06	< 10	1.94	375	< 1
N114200	205	294	< 0.2	5.43	< 2	70	< 0.5	< 2	1.44	1.5	18	117	3890	6.01	< 10	< 1	< 0.01	< 10	2.85	725	< 1
N114301	205	294	< 0.2	3.95	< 2	110	< 0.5	< 2	1.39	< 0.5	24	58	3940	6.08	< 10	< 1	< 0.01	< 10	2.37	835	< 1
N114302	205	294	< 0.2	3.27	< 2	1630	< 0.5	< 2	1.28	< 0.5	22	33	3250	5.44	< 10	< 1	< 0.01	< 10	2.22	890	< 1
N114303	205	294	< 0.2	3.41	< 2	1350	< 0.5	Intf*	0.98	< 0.5	26	41	>10000	6.00	< 10	< 1	< 0.01	< 10	2.50	895	< 1
N114304	205	294	< 0.2	3.96	< 2	360	< 0.5	Intf*	0.66	< 0.5	34	79	>10000	7.22	< 10	< 1	< 0.01	< 10	3.36	960	< 1
N114305	205	294	< 0.2	4.66	< 2	160	< 0.5	Intf*	0.21	< 0.5	36	83	>10000	8.55	< 10	< 1	< 0.01	< 10	3.77	1195	< 1
N114306	205	294	< 0.2	4.45	< 2	240	< 0.5	Intf*	0.21	2.0	85	74	>10000	9.90	< 10	< 1	0.08	< 10	3.15	1350	< 1
N114307	205	294	< 0.2	1.11	< 2	370	< 0.5	< 2	0.12	2.5	47	18	2380	3.40	< 10	< 1	0.20	< 10	0.41	485	< 1
N114308	205	294	< 0.2	0.85	< 2	410	< 0.5	< 2	0.11	0.5	29	29	2480	2.13	< 10	< 1	0.20	< 10	0.26	460	< 1

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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Analytical Chemists * Geochemists * Registered Assayers

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

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

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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
N114191	205	294	0.01	17	270	< 2	< 2	17	11	0.04	< 10	< 10	254	< 10	84
N114192	205	294	< 0.01	15	230	< 2	< 2	20	8	0.15	< 10	< 10	256	< 10	100
N114193	205	294	< 0.01	13	190	< 2	2	20	11	0.23	< 10	< 10	208	< 10	82
N114194	205	294	< 0.01	17	200	< 2	< 2	24	9	0.27	< 10	< 10	201	< 10	130
N114195	205	294	< 0.01	16	170	< 2	< 2	28	7	0.24	< 10	< 10	176	< 10	168
N114196	205	294	< 0.01	27	240	< 2	< 2	30	7	0.18	< 10	< 10	192	< 10	468
N114197	205	294	< 0.01	37	180	< 2	< 2	32	5	0.22	< 10	< 10	173	< 10	1090
N114198	205	294	< 0.01	43	120	< 2	< 2	20	24	0.26	< 10	< 10	101	< 10	280
N114199	205	294	0.01	57	Intf*	< 2	< 2	41	10	0.02	< 10	< 10	194	< 10	226
N114200	205	294	< 0.01	31	240	< 2	< 2	30	8	0.25	< 10	< 10	176	< 10	246
N114301	205	294	< 0.01	26	160	< 2	< 2	22	4	0.43	< 10	< 10	174	< 10	160
N114302	205	294	< 0.01	23	300	< 2	< 2	12	7	0.46	< 10	< 10	168	< 10	100
N114303	205	294	< 0.01	27	Intf*	< 2	< 2	16	5	0.41	< 10	< 10	193	< 10	112
N114304	205	294	< 0.01	35	Intf*	< 2	< 2	22	7	0.33	< 10	< 10	217	< 10	96
N114305	205	294	< 0.01	38	Intf*	< 2	< 2	24	4	0.08	< 10	< 10	237	< 10	144
N114306	205	294	< 0.01	44	Intf*	< 2	< 2	16	2	0.01	< 10	< 10	160	< 10	866
N114307	205	294	< 0.01	19	140	2	< 2	4	2	< 0.01	< 10	< 10	26	< 10	598
N114308	205	294	< 0.01	19	130	4	< 2	3	2	< 0.01	< 10	< 10	26	< 10	242

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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

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

Project : ICE-IC97-70
Comments:

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Certificate Date: 15-OCT-97
Invoice No. : 19745787
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745787

SAMPLE	PREP CODE		Cu %	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
N114265	208	294	1.89	< 0.2	1.83	< 2	490	< 0.5	Intf*	0.47	< 0.5	20	111	>10000	8.28	< 10	< 1	0.01	< 10	0.61	505
N114266	208	294	3.34	3.0	2.02	4	50	< 0.5	Intf*	0.10	< 0.5	26	113	>10000	10.85	< 10	< 1	< 0.01	< 10	0.23	280
N114267	208	294	1.96	4.0	0.05	20	< 10	< 0.5	Intf*	0.01	< 0.5	412	67	>10000	>15.00	< 10	1	< 0.01	< 10	< 0.01	5
N114268	208	294	4.32	19.4	0.07	16	< 10	< 0.5	Intf*	0.01	0.5	585	38	>10000	>15.00	< 10	1	< 0.01	< 10	0.01	50
N114269	208	294	7.55	30.0	0.05	22	< 10	< 0.5	Intf*	0.01	< 0.5	743	35	>10000	>15.00	< 10	3	< 0.01	< 10	< 0.01	45
N114270	208	294	3.62	< 0.2	4.14	< 2	110	< 0.5	Intf*	0.85	3.5	37	175	>10000	6.04	< 10	1	0.06	< 10	2.01	505
N114271	208	294	0.05	< 0.2	3.72	< 2	60	< 0.5	< 2	2.54	11.0	92	74	220	6.31	< 10	< 1	0.11	< 10	2.23	1095

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*INTERFERENCE: Cu ON Bi AND P.

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

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

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CERTIFICATE OF ANALYSIS A9745787

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N114265	208	294	< 1	< 0.01	17	Intf*	14	< 2	9	7	< 0.01	< 10	< 10	181	< 10	248
N114266	208	294	< 1	< 0.01	20	Intf*	64	< 2	12	49	0.02	< 10	< 10	409	< 10	172
N114267	208	294	15	< 0.01	8	Intf*	20	< 2	< 1	7	< 0.01	< 10	10	14	< 10	802
N114268	208	294	11	< 0.01	7	Intf*	24	< 2	< 1	6	< 0.01	< 10	10	7	< 10	798
N114269	208	294	14	< 0.01	7	Intf*	20	< 2	< 1	7	< 0.01	< 10	< 10	9	< 10	358
N114270	208	294	< 1	< 0.01	48	Intf*	< 2	< 2	19	11	0.07	< 10	< 10	137	< 10	704
N114271	208	294	< 1	< 0.01	57	200	< 2	< 2	12	9	0.19	< 10	< 10	97	< 10	2550

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*INTERFERENCE: Cu ON Bi AND P.

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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 : ICE-IC97-76
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Certificate Date: 13-OCT-97
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P.O. Number :
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CERTIFICATE OF ANALYSIS A9745786

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
N114296	205	294	< 0.2	2.78	2	780	< 0.5	< 2	1.76	1.5	33	21	4290	7.29	10	< 1	0.05	< 10	1.54	725	< 1
N114297	205	294	< 0.2	2.44	8	850	< 0.5	< 2	1.47	1.5	31	17	6330	7.27	10	< 1	0.06	< 10	1.56	685	< 1
N114298	205	294	< 0.2	2.37	2	700	< 0.5	< 2	1.30	1.5	35	28	4790	6.90	10	< 1	0.07	< 10	1.73	780	< 1
N114299	205	294	< 0.2	2.11	< 2	650	< 0.5	< 2	1.18	2.5	32	22	1300	6.01	< 10	< 1	0.11	< 10	1.69	695	< 1
N114300	205	294	< 0.2	2.57	< 2	650	< 0.5	< 2	1.41	3.5	37	20	142	6.65	10	< 1	0.12	< 10	1.73	750	< 1
N114351	205	294	< 0.2	2.55	< 2	680	< 0.5	< 2	1.77	4.0	51	15	75	7.66	10	< 1	0.15	< 10	1.44	920	< 1
N114352	205	294	< 0.2	2.61	< 2	860	< 0.5	< 2	1.72	5.0	58	20	2670	7.29	10	< 1	0.07	< 10	1.82	925	< 1
N114353	205	294	< 0.2	2.75	< 2	890	< 0.5	< 2	1.84	4.0	83	28	2250	8.61	10	< 1	0.10	< 10	1.78	1215	< 1
N114354	205	294	< 0.2	2.77	8	860	< 0.5	< 2	2.02	5.0	82	23	2370	8.44	10	< 1	0.13	< 10	1.73	1230	< 1

CERTIFICATION: Ian Bradley

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-76
Comments:

Certificate Date: 13-OCT-97
Invoice No. : I9745786
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Account : MPO

CERTIFICATE OF ANALYSIS A9745786

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
N114296	205	294	< 0.01	21	620	< 2	2	13	24	0.54	< 10	< 10	211	< 10	172
N114297	205	294	< 0.01	19	640	< 2	2	13	20	0.59	< 10	< 10	218	< 10	216
N114298	205	294	< 0.01	22	650	< 2	< 2	13	17	0.47	< 10	< 10	184	< 10	246
N114299	205	294	< 0.01	19	630	< 2	< 2	9	27	0.42	< 10	< 10	150	< 10	312
N114300	205	294	< 0.01	22	720	< 2	< 2	11	26	0.45	< 10	< 10	185	< 10	360
N114351	205	294	< 0.01	14	720	< 2	< 2	11	33	0.58	< 10	< 10	225	< 10	630
N114352	205	294	< 0.01	25	610	< 2	< 2	14	68	0.57	< 10	< 10	190	< 10	672
N114353	205	294	< 0.01	25	620	< 2	< 2	17	59	0.53	< 10	< 10	230	< 10	894
N114354	205	294	< 0.01	26	590	< 2	< 2	16	37	0.55	< 10	< 10	221	< 10	938

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

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

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Certificate Date: 11-OCT-97
Invoice No. :19745783
P.O. Number :
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CERTIFICATE OF ANALYSIS A9745783

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
N114254	205	294	< 0.2	3.59	< 2	440	< 0.5	< 2	2.95	0.5	43	27	723	5.96	< 10	< 1	< 0.01	< 10	1.85	925	< 1
N114255	205	294	< 0.2	3.60	< 2	530	< 0.5	< 2	4.26	< 0.5	32	69	115	6.31	< 10	< 1	< 0.01	< 10	2.00	1140	< 1
N114256	205	294	< 0.2	3.12	< 2	250	< 0.5	< 2	2.75	< 0.5	30	40	117	6.19	< 10	< 1	0.05	< 10	2.00	805	< 1
N114257	205	294	< 0.2	2.80	< 2	140	< 0.5	< 2	2.02	< 0.5	24	14	73	5.22	< 10	< 1	< 0.01	< 10	1.57	735	< 1
N114258	205	294	< 0.2	2.87	< 2	110	< 0.5	< 2	2.19	< 0.5	29	21	128	5.39	< 10	< 1	< 0.01	< 10	1.86	845	< 1
N114259	205	294	< 0.2	3.08	< 2	100	< 0.5	< 2	2.73	< 0.5	33	47	78	6.17	< 10	< 1	< 0.01	< 10	2.17	1075	< 1
N114260	205	294	< 0.2	1.96	< 2	100	< 0.5	< 2	0.53	< 0.5	23	44	607	5.65	< 10	< 1	0.01	< 10	1.43	460	< 1
N114261	205	294	< 0.2	3.80	< 2	110	< 0.5	< 2	0.59	0.5	65	89	1210	9.52	10	1	0.01	< 10	2.36	700	< 1
N114262	205	294	< 0.2	3.45	< 2	140	< 0.5	< 2	3.36	5.0	178	35	3610	12.35	< 10	< 1	0.01	< 10	2.13	2000	< 1
N114263	205	294	< 0.2	3.28	< 2	130	< 0.5	< 2	1.45	1.5	62	29	340	8.92	10	< 1	< 0.01	< 10	2.47	1160	< 1
N114264	205	294	< 0.2	3.15	< 2	60	< 0.5	< 2	1.35	6.0	57	19	3810	8.12	< 10	< 1	< 0.01	< 10	2.47	1675	< 1
N114355	205	294	< 0.2	3.67	< 2	1380	< 0.5	< 2	1.76	< 0.5	112	167	153	7.57	< 10	< 1	0.08	< 10	3.00	1215	< 1

CERTIFICATION: David Chamberlain

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 : ICE-IC97-70
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CERTIFICATE OF ANALYSIS A9745783

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
N114254	205	294	< 0.01	33	460	< 2	< 2	14	28	0.47	< 10	< 10	183	< 10	624
N114255	205	294	< 0.01	40	440	< 2	< 2	25	44	0.41	< 10	< 10	204	< 10	120
N114256	205	294	< 0.01	35	460	< 2	< 2	20	36	0.35	< 10	< 10	178	< 10	108
N114257	205	294	< 0.01	29	460	< 2	< 2	7	16	0.31	< 10	< 10	125	< 10	72
N114258	205	294	< 0.01	30	440	< 2	< 2	11	13	0.26	< 10	< 10	128	< 10	138
N114259	205	294	< 0.01	35	460	< 2	< 2	18	14	0.21	< 10	< 10	161	< 10	102
N114260	205	294	0.01	25	760	< 2	< 2	11	6	0.03	< 10	< 10	130	< 10	410
N114261	205	294	0.01	40	540	< 2	< 2	32	8	0.01	< 10	< 10	299	< 10	1230
N114262	205	294	< 0.01	46	490	< 2	< 2	25	22	< 0.01	< 10	< 10	279	< 10	3980
N114263	205	294	< 0.01	29	610	< 2	< 2	25	13	0.48	< 10	< 10	264	< 10	1280
N114264	205	294	< 0.01	28	500	< 2	< 2	15	8	0.59	< 10	< 10	229	< 10	1320
N114355	205	294	0.01	63	240	< 2	< 2	20	19	0.15	< 10	< 10	137	< 10	1830

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

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

Project : ICE-IC97-62
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Invoice No. :19745779
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Account :MPO

CERTIFICATE OF ANALYSIS A9745779

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
N114201	205	294	< 0.2	3.20	< 2	110	< 0.5	< 2	2.27	1.5	28	28	96	5.79	10	1	< 0.01	< 10	1.76	760	< 1
N114202	205	294	< 0.2	3.07	< 2	210	< 0.5	< 2	2.14	1.5	28	35	101	6.12	10	< 1	< 0.01	< 10	1.75	675	< 1
N114203	205	294	< 0.2	3.13	< 2	460	< 0.5	< 2	1.92	5.5	45	28	408	7.75	10	< 1	< 0.01	< 10	1.88	820	< 1
N114204	205	294	< 0.2	3.11	< 2	300	< 0.5	< 2	1.92	4.5	45	23	1110	7.42	10	< 1	0.01	< 10	1.83	865	< 1
N114205	205	294	< 0.2	3.52	6	180	< 0.5	< 2	1.37	6.5	75	40	1005	9.12	20	< 1	0.02	< 10	1.94	1160	< 1
N114206	205	294	< 0.2	2.63	< 2	100	< 0.5	< 2	1.51	2.5	29	18	290	5.86	10	< 1	< 0.01	< 10	1.61	660	< 1
N114207	205	294	< 0.2	2.73	< 2	370	< 0.5	< 2	1.72	4.0	36	23	600	6.54	10	< 1	0.01	< 10	1.77	845	< 1
N114208	205	294	< 0.2	2.71	< 2	110	< 0.5	< 2	1.64	3.0	32	18	333	5.97	10	< 1	< 0.01	< 10	1.62	740	< 1
N114209	205	294	< 0.2	2.74	< 2	130	< 0.5	< 2	1.45	3.5	37	20	288	6.35	10	< 1	0.01	< 10	1.72	785	< 1
N114210	205	294	< 0.2	3.51	< 2	200	< 0.5	< 2	1.81	8.5	60	43	1095	8.22	20	< 1	< 0.01	< 10	2.30	780	< 1
N114211	205	294	< 0.2	3.37	< 2	230	< 0.5	< 2	2.03	7.0	92	44	196	8.41	10	< 1	0.02	< 10	2.42	1460	< 1
N114212	205	294	< 0.2	3.29	< 2	120	< 0.5	< 2	2.06	4.5	72	36	741	7.87	10	< 1	0.05	< 10	2.29	995	< 1
N114213	205	294	< 0.2	3.90	< 2	90	< 0.5	< 2	2.01	5.0	56	44	2390	8.72	10	< 1	0.06	< 10	2.53	685	< 1
N114214	205	294	3.0	0.70	14	470	< 0.5	< 2	0.40	0.5	32	46	1010	13.00	10	< 1	0.03	< 10	0.33	110	26
N114215	205	294	< 0.2	0.93	82	70	< 0.5	6	0.21	0.5	13	173	2100	>15.00	50	< 1	0.39	< 10	0.36	90	76
N114216	205	294	< 0.2	3.98	4	610	< 0.5	< 2	1.21	2.0	35	203	1375	6.03	10	< 1	0.07	< 10	2.37	605	3
N114217	205	294	< 0.2	4.40	< 2	710	< 0.5	< 2	1.37	5.0	57	188	3140	7.28	10	< 1	0.07	< 10	2.87	810	< 1
N114218	205	294	< 0.2	4.21	4	1250	< 0.5	< 2	2.28	12.5	45	177	3120	6.42	10	< 1	0.08	< 10	2.96	700	< 1
N114219	205	294	< 0.2	4.50	< 2	1210	< 0.5	< 2	2.37	14.5	58	188	5190	7.04	10	< 1	0.05	< 10	3.17	795	< 1
N114220	205	294	< 0.2	4.67	< 2	160	< 0.5	< 2	3.24	9.5	57	126	250	5.46	10	< 1	< 0.01	< 10	3.07	1055	< 1
N114221	205	294	< 0.2	4.24	< 2	150	< 0.5	< 2	2.71	20.0	58	169	1190	5.90	10	< 1	< 0.01	< 10	3.20	1060	< 1
N114222	205	294	< 0.2	4.38	< 2	350	< 0.5	< 2	2.67	22.0	60	201	547	5.91	10	4	0.01	< 10	3.31	1005	< 1
N114223	205	294	< 0.2	4.91	< 2	210	< 0.5	< 2	3.09	20.0	53	191	1395	6.24	10	< 1	0.02	< 10	3.42	980	< 1
N114224	205	294	< 0.2	4.42	< 2	120	< 0.5	< 2	3.14	24.0	50	181	5220	5.65	10	< 1	0.03	< 10	2.82	825	< 1
N114225	205	294	< 0.2	4.32	< 2	150	< 0.5	< 2	2.84	17.0	43	153	3640	5.15	10	< 1	0.07	< 10	2.87	815	< 1
N114226	205	294	< 0.2	4.57	< 2	290	< 0.5	< 2	2.91	16.5	50	169	1030	5.53	10	< 1	0.08	< 10	3.18	1010	< 1
N114227	205	294	< 0.2	4.27	< 2	200	< 0.5	< 2	3.31	7.0	45	147	280	4.83	10	2	0.04	< 10	3.04	1005	< 1
N114228	205	294	< 0.2	4.45	< 2	100	< 0.5	< 2	3.80	4.5	48	127	152	4.99	10	< 1	0.05	< 10	2.88	1140	< 1
N114229	205	294	< 0.2	3.76	< 2	70	< 0.5	< 2	2.53	1.5	25	126	108	3.89	10	< 1	0.03	< 10	2.78	905	< 1
N114230	205	294	< 0.2	4.76	< 2	60	< 0.5	< 2	4.72	1.5	30	127	100	4.35	10	< 1	0.01	< 10	2.65	1145	< 1
N114231	205	294	< 0.2	4.35	< 2	80	< 0.5	< 2	3.51	3.0	46	159	115	5.33	10	< 1	0.03	< 10	2.89	1280	< 1
N114232	205	294	< 0.2	4.04	< 2	180	< 0.5	< 2	2.53	6.0	72	156	230	6.47	10	2	0.03	< 10	3.00	1425	< 1
N114233	205	294	< 0.2	4.55	< 2	1030	< 0.5	< 2	3.45	2.0	42	123	115	4.93	10	2	0.06	< 10	2.71	1125	< 1
N114234	205	294	< 0.2	4.89	< 2	110	< 0.5	< 2	3.98	2.5	42	107	118	4.73	10	< 1	0.06	< 10	2.53	1075	< 1
N114235	205	294	< 0.2	4.07	< 2	100	< 0.5	< 2	2.91	3.0	40	118	101	4.69	10	< 1	0.02	< 10	2.56	925	< 1
N114236	205	294	< 0.2	4.25	< 2	100	< 0.5	< 2	2.95	1.0	33	149	88	5.09	10	< 1	0.01	< 10	3.14	935	< 1

CERTIFICATION: Ian Bradley

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

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

Project : ICE-IC97-62
Comments:

Page Number :1-B
Total Pages :1
Certificate Date: 12-OCT-97
Invoice No. :19745779
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745779

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
N114201	205	294	< 0.01	30	500	< 2	< 2	10	19	0.45	< 10	< 10	175	< 10	100
N114202	205	294	< 0.01	33	480	< 2	< 2	10	19	0.53	< 10	< 10	189	< 10	104
N114203	205	294	< 0.01	28	670	< 2	< 2	18	17	0.65	< 10	< 10	261	< 10	682
N114204	205	294	< 0.01	26	620	< 2	< 2	17	27	0.64	< 10	< 10	242	< 10	526
N114205	205	294	< 0.01	32	690	< 2	< 2	26	31	0.37	< 10	< 10	283	< 10	1285
N114206	205	294	< 0.01	21	620	< 2	< 2	9	31	0.53	< 10	< 10	178	< 10	204
N114207	205	294	< 0.01	25	640	< 2	< 2	15	40	0.59	< 10	< 10	209	< 10	348
N114208	205	294	< 0.01	23	610	< 2	< 2	12	30	0.56	< 10	< 10	194	< 10	238
N114209	205	294	< 0.01	26	620	< 2	< 2	11	27	0.55	< 10	< 10	187	< 10	374
N114210	205	294	< 0.01	32	570	< 2	< 2	24	28	0.61	< 10	< 10	271	< 10	1300
N114211	205	294	< 0.01	34	600	< 2	< 2	27	35	0.61	< 10	< 10	272	< 10	816
N114212	205	294	< 0.01	32	620	< 2	< 2	25	44	0.65	< 10	< 10	271	< 10	920
N114213	205	294	< 0.01	28	450	< 2	< 2	31	40	0.45	< 10	< 10	247	< 10	1110
N114214	205	294	0.10	4	260	14	< 2	10	34	0.20	< 10	< 10	148	< 10	334
N114215	205	294	0.66	5	640	70	< 2	8	100	0.17	< 10	< 10	203	< 10	316
N114216	205	294	0.02	58	200	4	< 2	21	15	0.17	< 10	< 10	170	< 10	574
N114217	205	294	0.01	65	200	< 2	< 2	23	18	0.16	< 10	< 10	149	< 10	1130
N114218	205	294	< 0.01	62	140	< 2	< 2	19	22	0.21	< 10	< 10	146	< 10	974
N114219	205	294	< 0.01	61	150	< 2	< 2	20	19	0.26	< 10	< 10	161	< 10	1660
N114220	205	294	0.01	65	230	< 2	< 2	12	9	0.28	< 10	< 10	136	< 10	930
N114221	205	294	0.01	64	210	< 2	< 2	16	9	0.27	< 10	< 10	160	< 10	1530
N114222	205	294	< 0.01	68	220	< 2	< 2	21	19	0.27	< 10	< 10	168	< 10	2010
N114223	205	294	0.01	68	200	< 2	< 2	19	13	0.26	< 10	< 10	165	< 10	1395
N114224	205	294	0.01	62	190	< 2	< 2	19	12	0.25	< 10	< 10	142	< 10	1460
N114225	205	294	0.01	64	170	< 2	< 2	15	9	0.24	< 10	< 10	132	< 10	996
N114226	205	294	0.01	65	170	< 2	< 2	16	9	0.25	< 10	< 10	148	< 10	1220
N114227	205	294	0.02	62	180	< 2	< 2	13	11	0.24	< 10	< 10	126	< 10	644
N114228	205	294	0.01	64	180	< 2	< 2	12	10	0.23	< 10	< 10	124	< 10	860
N114229	205	294	0.01	57	180	< 2	< 2	9	8	0.23	< 10	< 10	99	< 10	100
N114230	205	294	0.02	59	190	< 2	< 2	11	13	0.22	< 10	< 10	130	< 10	158
N114231	205	294	0.02	63	180	< 2	< 2	14	9	0.26	< 10	< 10	139	< 10	538
N114232	205	294	0.01	62	190	< 2	< 2	13	28	0.28	< 10	< 10	131	< 10	1485
N114233	205	294	0.01	64	210	< 2	< 2	10	50	0.25	< 10	< 10	115	< 10	536
N114234	205	294	0.02	67	220	< 2	< 2	9	15	0.23	< 10	< 10	104	< 10	538
N114235	205	294	0.02	66	190	< 2	< 2	8	12	0.23	< 10	< 10	95	< 10	612
N114236	205	294	0.02	72	260	< 2	< 2	14	12	0.26	< 10	< 10	119	< 10	148

CERTIFICATION: Stewart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-67
Comments:

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Total Pages : 1
Certificate Date: 13-OCT-97
Invoice No. : 19745782
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745782

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
N114237	205	294	< 0.2	3.03	10	290	0.5	< 2	6.04	< 0.5	35	48	65	7.60	10	< 1	0.08	< 10	0.90	935	< 1
N114238	205	294	< 0.2	3.26	28	240	0.5	< 2	5.92	< 0.5	32	70	70	6.99	10	< 1	0.10	< 10	0.86	835	1
N114239	205	294	< 0.2	1.75	16	190	0.5	< 2	14.15	< 0.5	27	49	43	6.43	< 10	< 1	0.01	< 10	1.82	1700	< 1
N114240	205	294	< 0.2	2.93	2	280	< 0.5	< 2	2.35	< 0.5	33	44	107	10.40	10	< 1	0.03	< 10	1.76	900	< 1
N114241	205	294	< 0.2	2.65	2	400	< 0.5	< 2	2.74	< 0.5	28	20	60	7.06	10	< 1	0.03	< 10	1.52	770	< 1
N114242	205	294	< 0.2	3.01	< 2	340	< 0.5	< 2	3.09	1.5	43	36	89	7.77	10	< 1	0.06	< 10	1.66	775	< 1
N114243	205	294	< 0.2	2.11	6	310	< 0.5	< 2	1.44	2.5	30	9	401	5.68	< 10	< 1	0.08	< 10	1.16	635	< 1
N114244	205	294	< 0.2	3.13	2	200	< 0.5	< 2	2.37	4.5	41	31	421	7.34	10	< 1	0.04	< 10	1.99	1005	< 1
N114245	205	294	< 0.2	2.63	< 2	250	< 0.5	< 2	2.39	0.5	32	17	150	6.37	10	< 1	0.06	< 10	1.58	880	< 1
N114246	205	294	< 0.2	2.64	< 2	300	< 0.5	< 2	2.77	< 0.5	27	15	78	6.32	10	< 1	0.03	< 10	1.42	820	< 1
N114247	205	294	< 0.2	2.60	< 2	790	< 0.5	< 2	2.16	< 0.5	29	12	68	6.77	10	< 1	0.04	< 10	1.63	775	< 1
N114248	205	294	< 0.2	3.31	2	1030	< 0.5	< 2	2.16	9.5	34	117	1095	6.76	10	< 1	0.08	< 10	2.53	840	< 1
N114249	205	294	< 0.2	3.25	6	710	< 0.5	< 2	2.47	4.5	47	35	1220	7.89	10	< 1	0.05	< 10	2.22	835	< 1
N114250	205	294	< 0.2	3.48	6	1290	< 0.5	< 2	2.20	12.5	73	48	2640	9.75	10	< 1	0.07	< 10	2.71	870	< 1
N114251	205	294	< 0.2	3.54	2	400	< 0.5	< 2	1.48	8.5	33	185	1260	5.92	10	< 1	0.08	< 10	2.85	685	< 1
N114252	205	294	< 0.2	3.28	< 2	110	< 0.5	< 2	2.06	2.5	26	102	199	4.59	10	< 1	0.05	< 10	2.33	630	< 1
N114253	205	294	< 0.2	3.28	2	530	< 0.5	< 2	1.81	7.0	48	73	878	6.89	10	< 1	0.03	< 10	2.90	815	< 1

CERTIFICATION: Ian Bradley

Chemex Labs Ltd.

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WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-67
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Invoice No. : I9745782
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745782

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
N114237	205	294	< 0.01	44	760	< 2	< 2	31	14	< 0.01	< 10	< 10	239	< 10	116
N114238	205	294	0.01	42	580	< 2	< 2	28	15	< 0.01	< 10	< 10	199	< 10	92
N114239	205	294	< 0.01	37	390	< 2	< 2	18	41	< 0.01	< 10	< 10	157	< 10	130
N114240	205	294	0.01	30	870	< 2	< 2	23	24	0.48	< 10	< 10	299	< 10	130
N114241	205	294	< 0.01	24	680	< 2	< 2	18	23	0.48	< 10	< 10	234	< 10	102
N114242	205	294	0.02	32	720	< 2	< 2	26	23	0.21	< 10	< 10	276	< 10	428
N114243	205	294	0.01	22	670	< 2	< 2	7	18	0.35	< 10	< 10	145	< 10	566
N114244	205	294	0.02	29	690	< 2	< 2	19	31	0.29	< 10	< 10	217	< 10	902
N114245	205	294	0.01	24	640	< 2	< 2	12	25	0.39	< 10	< 10	179	< 10	254
N114246	205	294	< 0.01	23	620	< 2	< 2	13	21	0.48	< 10	< 10	203	< 10	134
N114247	205	294	0.01	23	670	< 2	< 2	9	20	0.59	< 10	< 10	224	< 10	112
N114248	205	294	0.01	41	390	< 2	< 2	18	18	0.29	< 10	< 10	174	< 10	794
N114249	205	294	< 0.01	26	580	< 2	< 2	22	32	0.54	< 10	< 10	251	< 10	1080
N114250	205	294	< 0.01	31	550	< 2	< 2	28	35	0.48	< 10	< 10	237	< 10	2560
N114251	205	294	0.03	54	260	< 2	< 2	19	9	0.25	< 10	< 10	145	< 10	924
N114252	205	294	0.04	53	290	< 2	< 2	8	6	0.21	< 10	< 10	114	< 10	446
N114253	205	294	0.02	41	380	< 2	< 2	12	44	0.36	< 10	< 10	160	< 10	1485

CERTIFICATION:

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Invoice No. : I9745779
P.O. Number :
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CERTIFICATE OF ANALYSIS A9745779

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
N114201	205	294	< 0.01	30	500	< 2	< 2	10	19	0.45	< 10	< 10	175	< 10	100
N114202	205	294	< 0.01	33	480	< 2	< 2	10	19	0.53	< 10	< 10	189	< 10	104
N114203	205	294	< 0.01	28	670	< 2	< 2	18	17	0.65	< 10	< 10	261	< 10	682
N114204	205	294	< 0.01	26	620	< 2	< 2	17	27	0.64	< 10	< 10	242	< 10	526
N114205	205	294	< 0.01	32	690	< 2	< 2	26	31	0.37	< 10	< 10	283	< 10	1285
N114206	205	294	< 0.01	21	620	< 2	< 2	9	31	0.53	< 10	< 10	178	< 10	204
N114207	205	294	< 0.01	25	640	< 2	< 2	15	40	0.59	< 10	< 10	209	< 10	348
N114208	205	294	< 0.01	23	610	< 2	< 2	12	30	0.56	< 10	< 10	194	< 10	238
N114209	205	294	< 0.01	26	620	< 2	< 2	11	27	0.55	< 10	< 10	187	< 10	374
N114210	205	294	< 0.01	32	570	< 2	< 2	24	28	0.61	< 10	< 10	271	< 10	1300
N114211	205	294	< 0.01	34	600	< 2	< 2	27	35	0.61	< 10	< 10	272	< 10	816
N114212	205	294	< 0.01	32	620	< 2	< 2	25	44	0.65	< 10	< 10	271	< 10	920
N114213	205	294	< 0.01	28	450	< 2	< 2	31	40	0.45	< 10	< 10	247	< 10	1110
N114214	205	294	0.10	4	260	14	< 2	10	34	0.20	< 10	< 10	148	< 10	334
N114215	205	294	0.66	5	640	70	< 2	8	100	0.17	< 10	< 10	203	< 10	316
N114216	205	294	0.02	58	200	4	< 2	21	15	0.17	< 10	< 10	170	< 10	574
N114217	205	294	0.01	65	200	< 2	< 2	23	18	0.16	< 10	< 10	149	< 10	1130
N114218	205	294	< 0.01	62	140	< 2	< 2	19	22	0.21	< 10	< 10	146	< 10	974
N114219	205	294	< 0.01	61	150	< 2	< 2	20	19	0.26	< 10	< 10	161	< 10	1660
N114220	205	294	0.01	65	230	< 2	< 2	12	9	0.28	< 10	< 10	136	< 10	930
N114221	205	294	0.01	64	210	< 2	< 2	16	9	0.27	< 10	< 10	160	< 10	1530
N114222	205	294	< 0.01	68	220	< 2	< 2	21	19	0.27	< 10	< 10	168	< 10	2010
N114223	205	294	0.01	68	200	< 2	< 2	19	13	0.26	< 10	< 10	165	< 10	1395
N114224	205	294	0.01	62	190	< 2	< 2	19	12	0.25	< 10	< 10	142	< 10	1460
N114225	205	294	0.01	64	170	< 2	< 2	15	9	0.24	< 10	< 10	132	< 10	996
N114226	205	294	0.01	65	170	< 2	< 2	16	9	0.25	< 10	< 10	148	< 10	1220
N114227	205	294	0.02	62	180	< 2	< 2	13	11	0.24	< 10	< 10	126	< 10	644
N114228	205	294	0.01	64	180	< 2	< 2	12	10	0.23	< 10	< 10	124	< 10	860
N114229	205	294	0.01	57	180	< 2	< 2	9	8	0.23	< 10	< 10	99	< 10	100
N114230	205	294	0.02	59	190	< 2	< 2	11	13	0.22	< 10	< 10	130	< 10	158
N114231	205	294	0.02	63	180	< 2	< 2	14	9	0.26	< 10	< 10	139	< 10	538
N114232	205	294	0.01	62	190	< 2	< 2	13	28	0.28	< 10	< 10	131	< 10	1485
N114233	205	294	0.01	64	210	< 2	< 2	10	50	0.25	< 10	< 10	115	< 10	536
N114234	205	294	0.02	67	220	< 2	< 2	9	15	0.23	< 10	< 10	104	< 10	538
N114235	205	294	0.02	66	190	< 2	< 2	8	12	0.23	< 10	< 10	95	< 10	612
N114236	205	294	0.02	72	260	< 2	< 2	14	12	0.26	< 10	< 10	119	< 10	148

CERTIFICATION: Stuart Bachler

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

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

Project : ICE-IC97-78
Comments:

Page :1-A
Total Pages :1
Certificate Date: 11-OCT-97
Invoice No. :I9745777
P.O. Number :
Account :MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9745777

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
N114356	205	294	< 0.2	1.77	< 2	40	< 0.5	< 2	0.44	< 0.5	21	89	2660	>15.00	< 10	< 1	0.02	< 10	0.65	165	< 1
N114357	205	294	< 0.2	2.94	< 2	130	< 0.5	< 2	1.13	1.5	26	90	2410	9.09	< 10	< 1	0.05	< 10	1.54	490	< 1
N114358	205	294	< 0.2	2.78	< 2	80	< 0.5	< 2	1.47	2.5	24	50	1530	5.74	< 10	< 1	0.06	< 10	1.57	640	< 1
N114359	205	294	< 0.2	3.53	< 2	110	< 0.5	< 2	1.98	4.5	27	80	6200	6.31	< 10	< 1	0.05	< 10	1.99	710	< 1
N114360	205	294	< 0.2	3.15	< 2	120	< 0.5	< 2	2.21	4.5	25	54	3440	5.66	< 10	< 1	0.03	< 10	1.84	695	< 1
N114361	205	294	< 0.2	2.82	< 2	910	< 0.5	Intf*	1.64	3.5	29	53	>10000	6.86	< 10	< 1	0.03	< 10	2.08	720	< 1
N114362	205	294	< 0.2	3.64	< 2	200	< 0.5	< 2	2.58	4.5	28	66	5270	6.00	< 10	< 1	0.04	< 10	2.22	740	< 1
N114363	205	294	< 0.2	3.16	< 2	580	< 0.5	< 2	1.98	3.5	29	72	4260	5.78	< 10	< 1	0.01	< 10	2.26	790	< 1
N114364	205	294	< 0.2	3.12	< 2	190	< 0.5	< 2	2.14	4.5	28	53	3970	5.59	< 10	< 1	0.05	< 10	1.90	785	< 1
N114365	205	294	< 0.2	3.35	< 2	40	< 0.5	< 2	1.83	4.0	31	58	9720	6.47	< 10	< 1	0.03	< 10	2.11	800	< 1
N114366	205	294	< 0.2	2.90	< 2	130	< 0.5	Intf*	1.44	14.0	132	57	>10000	9.59	< 10	< 1	0.04	< 10	1.24	955	< 1
N114367	205	294	< 0.2	3.02	< 2	190	< 0.5	< 2	1.25	10.5	85	31	2450	8.42	< 10	< 1	0.03	< 10	2.03	1105	< 1

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

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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
N114356	205	294	< 0.01	14	180	< 2	< 2	13	4	0.16	< 10	10	183	< 10	188
N114357	205	294	< 0.01	26	330	< 2	2	24	8	0.20	< 10	< 10	149	< 10	166
N114358	205	294	< 0.01	30	220	< 2	< 2	15	6	0.28	< 10	< 10	120	< 10	128
N114359	205	294	< 0.01	34	210	< 2	2	19	7	0.28	< 10	< 10	143	< 10	126
N114360	205	294	< 0.01	32	210	< 2	< 2	14	7	0.36	< 10	< 10	148	< 10	118
N114361	205	294	< 0.01	31	Intf*	< 2	< 2	13	15	0.35	< 10	< 10	136	< 10	204
N114362	205	294	< 0.01	35	270	< 2	< 2	14	10	0.35	< 10	< 10	146	< 10	134
N114363	205	294	< 0.01	37	250	< 2	< 2	13	9	0.39	< 10	< 10	145	< 10	148
N114364	205	294	< 0.01	30	300	< 2	< 2	12	7	0.37	< 10	< 10	136	< 10	196
N114365	205	294	< 0.01	31	300	< 2	< 2	15	10	0.36	< 10	< 10	144	< 10	352
N114366	205	294	< 0.01	30	Intf*	< 2	< 2	20	12	0.11	< 10	< 10	122	< 10	3220
N114367	205	294	< 0.01	29	650	< 2	< 2	19	37	0.47	< 10	< 10	186	< 10	1685

CERTIFICATION: Ken Neddle

*INTERFERENCE: Cu ON Bi AND P.

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Project : ICE-IC97-77
Comments:

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Certificate Date: 13-OCT-97
Invoice No. : I9745776
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745776

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
N114338	205	294	< 0.2	3.69	2	100	< 0.5	< 2	2.56	< 0.5	27	23	132	5.74	10	< 1	< 0.01	< 10	1.99	805	< 1
N114339	205	294	< 0.2	3.52	4	40	< 0.5	< 2	2.16	< 0.5	28	25	179	6.16	10	< 1	< 0.01	< 10	2.21	850	< 1
N114340	205	294	< 0.2	3.50	< 2	90	< 0.5	< 2	2.52	1.0	35	20	581	6.09	10	< 1	< 0.01	< 10	1.85	865	< 1
N114341	205	294	< 0.2	3.34	< 2	80	< 0.5	< 2	2.16	9.5	101	30	5100	8.58	10	< 1	0.04	< 10	2.03	1180	< 1
N114342	205	294	< 0.2	4.24	4	70	< 0.5	< 2	1.38	5.5	33	60	9830	9.05	10	< 1	0.04	< 10	1.35	650	< 1
N114343	205	294	59.0	0.21	2	70	< 0.5	< 2	0.13	< 0.5	7	96	483	1.01	< 10	9	0.01	< 10	0.14	90	2
N114344	205	294	53.0	0.29	12	190	< 0.5	< 2	0.09	< 0.5	3	46	530	1.30	< 10	6	0.01	< 10	0.10	50	7
N114345	205	294	60.2	0.06	4	280	< 0.5	< 2	0.04	< 0.5	3	163	131	1.10	< 10	6	< 0.01	< 10	0.04	30	6
N114346	205	294	0.2	2.56	18	70	< 0.5	16	0.18	2.0	22	184	6670	14.30	30	< 1	0.35	< 10	0.47	135	6
N114347	205	294	< 0.2	4.50	4	90	< 0.5	Intf*	1.23	4.5	40	168	>10000	7.28	< 10	1	0.06	< 10	2.56	995	< 1
N114348	205	294	< 0.2	3.72	< 2	110	< 0.5	< 2	1.97	5.5	53	139	5620	6.06	10	< 1	0.07	< 10	2.75	1005	< 1
N114349	205	294	< 0.2	3.45	< 2	120	< 0.5	< 2	2.05	7.5	95	156	2590	6.77	< 10	< 1	0.03	< 10	2.77	1185	< 1
N114350	205	294	< 0.2	3.97	< 2	50	< 0.5	< 2	2.61	2.5	88	172	2100	6.97	10	< 1	0.04	< 10	3.01	1230	< 1
N114401	205	294	< 0.2	3.34	< 2	480	< 0.5	< 2	2.15	3.0	132	160	1095	7.27	< 10	< 1	0.07	< 10	2.97	1370	< 1
N114402	205	294	< 0.2	3.46	< 2	290	< 0.5	< 2	1.54	3.5	125	168	2620	7.68	< 10	< 1	0.06	< 10	3.19	1230	< 1
N114403	205	294	< 0.2	3.49	< 2	370	< 0.5	< 2	1.40	8.5	142	186	2230	9.04	< 10	< 1	0.12	< 10	3.37	1225	< 1
N114404	205	294	< 0.2	3.74	< 2	90	< 0.5	< 2	1.14	4.5	110	191	904	7.96	< 10	< 1	0.03	< 10	3.97	1125	< 1

CERTIFICATION: Ward Brechler

* INTERFERENCE: Cu on Bi and P

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Project : ICE-IC97-77
Comments:

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Certificate Date: 13-OCT-97
Invoice No. : I9745776
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745776

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
N114338	205	294	< 0.01	30	510	< 2	< 2	8	12	0.49	< 10	< 10	180	< 10	126
N114339	205	294	0.01	30	500	< 2	< 2	8	8	0.55	< 10	< 10	187	< 10	108
N114340	205	294	< 0.01	29	460	< 2	< 2	9	9	0.47	< 10	< 10	181	< 10	338
N114341	205	294	< 0.01	33	450	< 2	< 2	17	14	0.50	< 10	< 10	204	< 10	2350
N114342	205	294	< 0.01	25	160	2	2	24	15	0.20	< 10	< 10	166	< 10	486
N114343	205	294	0.01	3	40	6	< 2	1	4	0.03	< 10	< 10	16	< 10	162
N114344	205	294	0.01	3	40	10	< 2	1	4	0.03	< 10	< 10	17	< 10	64
N114345	205	294	0.01	2	10	6	< 2	< 1	6	< 0.01	< 10	< 10	5	< 10	84
N114346	205	294	0.76	15	380	86	2	13	81	0.08	< 10	< 10	169	< 10	614
N114347	205	294	0.03	58	Intf*	2	4	19	27	0.18	< 10	< 10	129	< 10	458
N114348	205	294	0.05	61	230	< 2	< 2	11	14	0.26	< 10	< 10	115	< 10	696
N114349	205	294	0.03	65	200	2	< 2	15	25	0.25	< 10	< 10	128	< 10	1865
N114350	205	294	0.03	75	300	2	< 2	15	18	0.27	< 10	< 10	136	< 10	1260
N114401	205	294	0.02	68	240	< 2	2	15	22	0.28	< 10	< 10	132	< 10	2110
N114402	205	294	0.01	76	210	< 2	< 2	15	20	0.25	< 10	< 10	132	< 10	2290
N114403	205	294	0.01	70	220	< 2	< 2	20	16	0.25	< 10	< 10	149	< 10	4450
N114404	205	294	0.03	74	270	2	< 2	16	7	0.24	< 10	< 10	134	< 10	2280

CERTIFICATION: _____

* INTERFERENCE: Cu on Bi and P

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Project : ICE-IC97-75
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Invoice No. : 19745775
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745775

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
N114315	205	294	0.2	3.92	< 2	190	< 0.5	< 2	1.65	3.0	25	89	4790	7.09	< 10	1	0.01	< 10	2.57	585	< 1
N114316	205	294	0.2	3.70	< 2	70	< 0.5	< 2	1.14	3.0	17	162	4660	7.13	< 10	1	0.01	< 10	2.71	565	< 1
N114317	205	294	0.2	3.76	< 2	90	< 0.5	< 2	1.27	3.0	17	148	4990	6.46	< 10	< 1	< 0.01	< 10	2.85	500	< 1
N114318	205	294	0.2	3.10	< 2	40	< 0.5	< 2	1.02	2.5	18	125	3690	5.17	< 10	< 1	< 0.01	< 10	2.55	470	< 1
N114319	205	294	< 0.2	3.47	< 2	70	< 0.5	< 2	1.31	1.5	22	51	2890	5.57	< 10	< 1	0.01	< 10	2.66	605	< 1
N114320	205	294	< 0.2	3.54	< 2	60	< 0.5	< 2	1.52	1.5	22	83	2480	5.37	< 10	< 1	< 0.01	< 10	2.76	640	< 1
N114321	205	294	< 0.2	3.32	< 2	50	< 0.5	< 2	1.47	2.5	21	48	2490	5.37	< 10	< 1	< 0.01	< 10	2.60	655	< 1
N114322	205	294	< 0.2	3.26	< 2	40	< 0.5	< 2	1.33	1.0	27	82	2530	5.68	< 10	< 1	< 0.01	< 10	2.78	715	< 1
N114323	205	294	< 0.2	3.05	< 2	30	< 0.5	< 2	1.27	1.5	28	42	4420	5.61	< 10	< 1	< 0.01	< 10	2.59	640	< 1
N114324	205	294	< 0.2	3.55	< 2	60	< 0.5	< 2	1.39	2.0	36	68	2520	6.39	< 10	< 1	< 0.01	< 10	2.92	785	< 1
N114325	205	294	< 0.2	3.60	< 2	70	< 0.5	< 2	0.96	1.5	40	93	5520	7.10	< 10	< 1	< 0.01	< 10	3.14	895	< 1
N114326	205	294	< 0.2	3.23	< 2	10	< 0.5	< 2	0.81	5.0	43	70	634	6.65	< 10	< 1	< 0.01	< 10	3.00	1005	< 1
N114327	205	294	< 0.2	3.48	< 2	260	< 0.5	< 2	0.80	1.5	58	106	897	7.39	< 10	< 1	< 0.01	< 10	3.36	1265	< 1
N114328	205	294	< 0.2	4.19	< 2	460	< 0.5	< 2	0.52	1.5	139	96	6610	11.90	< 10	< 1	0.03	< 10	3.48	1755	< 1
N114594	205	294	< 0.2	0.71	2	260	< 0.5	< 2	0.20	2.0	81	23	2850	4.01	< 10	< 1	0.18	< 10	0.27	710	< 1

CERTIFICATION: Ian Bachlan

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Project : ICE-IC97-75
Comments:

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Total Pages :1
Certificate Date: 11-OCT-97
Invoice No. :19745775
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9745775

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
N114315	205	294	< 0.01	25	290	< 2	< 2	20	12	0.28	< 10	< 10	155	< 10	362
N114316	205	294	< 0.01	40	270	6	< 2	18	6	0.24	< 10	< 10	143	< 10	836
N114317	205	294	< 0.01	42	240	8	< 2	16	5	0.20	< 10	< 10	119	< 10	506
N114318	205	294	0.01	45	180	2	< 2	11	3	0.17	< 10	< 10	89	< 10	396
N114319	205	294	< 0.01	31	290	< 2	< 2	10	3	0.29	< 10	< 10	142	< 10	146
N114320	205	294	< 0.01	39	270	< 2	< 2	10	3	0.32	< 10	< 10	146	< 10	172
N114321	205	294	< 0.01	31	270	< 2	2	9	3	0.33	< 10	< 10	152	< 10	384
N114322	205	294	< 0.01	35	290	< 2	< 2	9	4	0.40	< 10	< 10	164	< 10	220
N114323	205	294	< 0.01	30	310	< 2	< 2	9	3	0.40	< 10	< 10	165	< 10	152
N114324	205	294	< 0.01	38	330	< 2	< 2	13	4	0.44	< 10	< 10	186	< 10	242
N114325	205	294	< 0.01	39	300	< 2	< 2	15	3	0.40	< 10	< 10	187	< 10	252
N114326	205	294	< 0.01	35	320	< 2	< 2	9	3	0.35	< 10	< 10	163	< 10	342
N114327	205	294	< 0.01	50	350	< 2	< 2	12	3	0.37	< 10	< 10	174	< 10	522
N114328	205	294	< 0.01	47	350	< 2	< 2	21	7	0.16	< 10	< 10	185	< 10	1630
N114594	205	294	< 0.01	22	140	2	< 2	3	2	0.01	< 10	< 10	22	< 10	1385

CERTIFICATION:

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Project : ICE-IC97-71
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Invoice No. : 19745774
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745774

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
N114309	205	294	< 0.2	4.54	< 2	190	< 0.5	< 2	0.47	< 0.5	22	128	2660	9.44	10	< 1	0.02	< 10	2.32	775	< 1
N114310	205	294	< 0.2	5.21	< 2	250	< 0.5	< 2	0.28	< 0.5	21	114	2970	9.08	10	< 1	0.08	< 10	2.05	675	< 1
N114311	205	294	< 0.2	0.89	10	1600	< 0.5	< 2	0.09	< 0.5	4	54	998	4.46	< 10	< 1	0.16	< 10	0.19	110	1
N114312	205	294	< 0.2	0.80	6	490	< 0.5	< 2	0.06	< 0.5	3	61	882	3.51	< 10	< 1	0.13	< 10	0.13	140	1
N114313	205	294	< 0.2	0.40	8	470	< 0.5	< 2	0.04	< 0.5	1	61	431	3.67	< 10	< 1	0.12	< 10	0.06	20	5
N114314	205	294	0.2	0.57	6	620	< 0.5	< 2	0.02	< 0.5	1	28	694	3.36	< 10	< 1	0.18	10	0.07	15	2

CERTIFICATION: Ian Pitcher

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Account : MPO

CERTIFICATE OF ANALYSIS A9745774

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
N114309	205	294	0.01	30	480	10	2	25	20	0.04	< 10	< 10	270	< 10	176
N114310	205	294	< 0.01	33	370	< 2	2	24	12	< 0.01	< 10	< 10	211	< 10	166
N114311	205	294	< 0.01	8	360	8	< 2	8	11	< 0.01	< 10	< 10	40	< 10	48
N114312	205	294	< 0.01	8	180	4	< 2	4	3	< 0.01	< 10	< 10	42	< 10	42
N114313	205	294	< 0.01	4	190	8	< 2	1	3	< 0.01	< 10	< 10	33	< 10	20
N114314	205	294	< 0.01	5	180	8	< 2	1	2	< 0.01	< 10	< 10	20	< 10	32

CERTIFICATION:

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Invoice No. :19745428
P.O. Number :
Account :MPO

Project : ICE-IC97-57 CHECK
Comments: CHECK RESULTS FOR SAMPLES ORIGINALLY ON A9743717

* ADDITIONAL DATA *

CERTIFICATE OF ANALYSIS A9745428

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
N113862	244	229	1.6	2.60	4	590	< 0.5	< 2	1.51	1.5	24	73	4400	5.90	< 10	< 1	0.07	< 10	1.26	525	< 1
N113863	244	229	69.8	0.07	2	100	< 0.5	< 2	0.04	0.5	4	179	242	2.13	< 10	12	< 0.01	< 10	0.03	25	5

CERTIFICATION: David Sutherland

* From Certificate of Analysis A9743717

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P.O. Number :
Account : MPO

Project : ICE-IC97-57 CHECK
Comments: CHECK RESULTS FOR SAMPLES ORIGINALLY ON A9743717

* ADDITIONAL DATA *

CERTIFICATE OF ANALYSIS A9745428

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
N113862	244	229	< 0.01	29	520	6	< 2	10	29	0.31	< 10	< 10	145	< 10	170
N113863	244	229	< 0.01	3	10	6	< 2	< 1	3	< 0.01	< 10	< 10	5	< 10	242

CERTIFICATION: David Bucholz

* From Certificate of Analysis A9743717

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Account : MPO

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9743719

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
N113737	205	294	< 0.2	4.18	4	40	< 0.5	< 2	0.39	16.5	302	114	4070	>15.00	10	4	0.04	< 10	3.10	1550	< 1
N113738	205	294	1.6	2.69	12	10	< 0.5	< 2	0.08	30.0	199	76	5230	13.10	10	85	< 0.01	< 10	1.96	465	9
N113739	205	294	0.4	3.01	2	20	< 0.5	< 2	0.09	22.0	74	91	4060	10.75	10	< 1	< 0.01	< 10	2.72	715	1
N113740	205	294	< 0.2	3.13	< 2	60	< 0.5	< 2	2.70	25.0	140	56	2330	10.75	10	< 1	0.04	< 10	1.75	1185	< 1
N113741	205	294	< 0.2	3.18	6	100	< 0.5	< 2	2.20	9.0	90	75	987	9.47	10	1	0.03	< 10	2.22	1280	< 1

CERTIFICATION: _____

* FOR ALL DATA

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British Columbia, Canada V7J 2C1
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CERTIFICATE OF ANALYSIS A9743719

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
N113737	205	294	< 0.01	56	300	< 2	2	18	6	< 0.01	< 10	10	176	< 10	9830
N113738	205	294	< 0.01	21	250	30	2	10	< 1	< 0.01	< 10	< 10	100	< 10	8620
N113739	205	294	< 0.01	26	240	38	< 2	12	< 1	< 0.01	< 10	< 10	80	< 10	7250
N113740	205	294	0.01	39	570	2	< 2	18	10	0.32	< 10	< 10	168	< 10	4770
N113741	205	294	0.03	47	490	< 2	2	22	9	0.39	< 10	< 10	205	< 10	2270

CERTIFICATION: Ian Bradshaw *

* FOR ALL DATA

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Invoice No. : 19745047
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745047

SAMPLE	PREP CODE	Cu %
N113976	244 --	0.52
N113977	244 --	0.31
N113978	244 --	0.20
N113979	244 --	0.27
N113980	244 --	0.18
N113981	244 --	0.21
N113982	244 --	0.36
N113983	244 --	0.30
N113984	244 --	0.33
N113985	244 --	0.49
N113986	244 --	0.78
N113987	244 --	0.67
N113988	244 --	0.31
N113989	244 --	0.64
N113990	244 --	0.31
N113996	244 --	0.25
N113997	244 --	0.50
N113998	244 --	0.48
N113999	244 --	0.80
N114000	244 --	0.16
N114001	244 --	0.30
N114002	244 --	0.08
N114003	244 --	0.24

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Certificate Date: 07-OCT-97
Invoice No. : I9745046
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9745046

SAMPLE	PREP CODE	Cu %
N113742	244 --	0.18
N113743	244 --	0.40
N113744	244 --	0.22
N113750	244 --	0.18
N113901	244 --	0.33
N113902	244 --	0.22
N113903	244 --	0.17
N113904	244 --	0.17
N113905	244 --	0.27
N113906	244 --	0.16
N113907	244 --	0.19
N113908	244 --	0.06
N113909	244 --	0.24
N113914	244 --	0.38

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Invoice No. : I9745045
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CERTIFICATE OF ANALYSIS A9745045

SAMPLE	PREP CODE	Cu %
N113813	244 --	0.19
N113814	244 --	0.21
N113815	244 --	0.27
N113816	244 --	0.31
N113817	244 --	0.28
N113818	244 --	0.27
N113819	244 --	0.21
N113820	244 --	0.26
N113821	244 --	0.20
N113822	244 --	0.20
N113823	244 --	0.37
N113824	244 --	0.22
N113825	244 --	0.48
N113826	244 --	0.32
N113827	244 --	0.36
N113828	244 --	0.34
N113829	244 --	0.31
N113830	244 --	0.38
N113831	244 --	0.27
N113832	244 --	0.24
N113833	244 --	0.29
N113834	244 --	0.68
N113835	244 --	2.81

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Certificate Date: 14-OCT-97
Invoice No. : 19745044
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CERTIFICATE OF ANALYSIS A9745044

SAMPLE	PREP CODE		Cu %
N113737	244	--	0.46
N113738	244	--	0.59
N113739	244	--	0.47
N113740	244	--	0.27
N113741	244	--	0.12

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Certificate Date: 02-OCT-97
Invoice No. : I9744914
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9744914

SAMPLE	PREP CODE	Cu %
N113835	244 --	2.78

CERTIFICATION: David Leinard

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Project : ICE-IC97-53
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Certificate Date: 03-OCT-97
Invoice No. : I9744215
P.O. Number :
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CERTIFICATE OF ANALYSIS A9744215

SAMPLE	PREP CODE		Cu %
N113781	244	--	0.41
N113782	244	--	0.24
N113783	244	--	0.39
N113784	244	--	0.27
N113785	244	--	0.26
N113786	244	--	0.49
N113787	244	--	0.25

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Certificate Date: 29-SEP-97
Invoice No. : I9744214
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9744214

SAMPLE	PREP CODE	Cu %
N113625	244 --	0.23
N113626	244 --	0.17
N113627	244 --	0.22
N113628	244 --	0.16
N113629	244 --	0.20

CERTIFICATION: Said Cathro

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Certificate Date: 29-SEP-97
Invoice No. : 19744213
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CERTIFICATE OF ANALYSIS A9744213

SAMPLE	PREP CODE	Cu %
N113617	244 --	0.75
N113618	244 --	0.21
N113619	244 --	0.10
N113620	244 --	0.32
N113621	244 --	0.49
N113622	244 --	0.67
N113623	244 --	0.34
N113624	244 --	0.42

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Invoice No. : I9743719
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CERTIFICATE OF ANALYSIS A9743719

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
N113737	205	294	< 0.2	3.88	< 2	40	< 0.5	< 2	0.38	14.5	303	97	4430	>15.00	10	3	0.03	< 10	3.22	1545	< 1
N113738	205	294	< 0.2	0.14	< 2	230	< 0.5	< 2	0.02	< 0.5	1	229	15	0.67	< 10	< 1	0.04	< 10	0.03	65	< 1
N113739	205	294	1.4	2.60	10	< 10	< 0.5	< 2	0.07	26.5	203	59	5370	12.35	10	81	< 0.01	< 10	2.01	450	7
N113740	205	294	0.6	2.97	10	10	< 0.5	< 2	0.08	19.5	74	74	4230	10.35	10	< 1	< 0.01	< 10	2.79	695	< 1
N113741	205	294	< 0.2	2.98	2	60	< 0.5	< 2	2.35	23.0	143	50	2550	10.55	10	< 1	0.04	< 10	1.82	1170	< 1

CERTIFICATION: Heather Buchler

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CERTIFICATE OF ANALYSIS A9743719

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
N113737	205	294	< 0.01	56	290	6	< 2	16	5	< 0.01	< 10	10	154	< 10	9750
N113738	205	294	< 0.01	7	40	32	< 2	< 1	8	< 0.01	< 10	< 10	5	< 10	30
N113739	205	294	< 0.01	20	220	28	< 2	9	< 1	< 0.01	< 10	10	88	< 10	8350
N113740	205	294	< 0.01	25	260	36	< 2	11	< 1	< 0.01	< 10	< 10	73	< 10	7080
N113741	205	294	0.01	39	590	< 2	< 2	16	9	0.25	< 10	< 10	149	< 10	4770

CERTIFICATION: David Bradley

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CERTIFICATE OF ANALYSIS A9743717

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
N113862	205	294	1.6	2.26	4	530	< 0.5	< 2	1.22	1.5	24	66	4180	5.66	< 10	< 1	0.05	< 10	1.23	490	< 1
N113863	205	294	66.4	0.06	2	90	< 0.5	< 2	0.03	0.5	4	156	238	2.07	< 10	13	< 0.01	< 10	0.03	20	5

CERTIFICATION: Stan Bichler

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CERTIFICATE OF ANALYSIS A9743717

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
N113862	205	294	0.01	29	520	2	< 2	9	22	0.26	< 10	< 10	120	< 10	164
N113863	205	294	0.01	3	10	4	< 2	< 1	3	< 0.01	< 10	< 10	4	< 10	236

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CERTIFICATE OF ANALYSIS A9743716

SAMPLE	PREP CODE		Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N113722	208	294	0.44	< 1	4.88	< 10	120	< 5	< 10	0.28	< 5	80	190	3930	12.35	10	0.02	2.43	510	< 5	0.02
N113723	208	294	1.83	< 1	4.27	< 10	80	< 5	< 10	0.23	< 5	65	190	17180	9.07	< 10	0.05	2.46	640	< 5	0.04
N113724	208	294	2.36	< 1	3.25	< 10	60	< 5	< 10	0.15	< 5	60	230	21700	8.48	< 10	0.02	1.81	600	< 5	0.04
N113725	208	294	3.49	< 1	3.46	< 10	60	< 5	< 10	0.16	< 5	100	220	31900	10.45	< 10	0.03	1.41	480	< 5	0.05
N113726	208	294	0.53	< 1	4.75	< 10	40	< 5	< 10	0.18	< 5	135	260	4740	13.65	< 10	0.04	3.47	870	< 5	0.03
N113727	208	294	0.73	< 1	4.30	< 10	80	< 5	< 10	0.18	5	200	230	6590	14.15	< 10	0.14	3.16	1010	< 5	0.03
N113728	208	294	0.80	< 1	3.95	< 10	60	< 5	< 10	0.20	< 5	175	230	7210	12.30	< 10	0.06	2.86	900	< 5	0.04
N113729	208	294	0.53	< 1	3.89	< 10	660	< 5	< 10	1.05	5	90	190	4820	8.03	< 10	0.08	2.95	850	< 5	0.03
N113730	208	294	0.59	< 1	3.44	< 10	60	< 5	< 10	0.84	5	70	190	5240	7.57	< 10	0.10	2.65	750	< 5	0.03
N113731	208	294	0.44	< 1	3.59	< 10	60	< 5	< 10	1.23	10	75	200	3980	7.39	< 10	0.10	2.54	800	< 5	0.03
N113732	208	294	0.50	< 1	2.69	< 10	120	< 5	< 10	3.64	20	350	110	4610	13.40	< 10	0.19	2.65	2730	< 5	0.03
N113733	208	294	0.20	< 1	4.87	< 10	220	< 5	< 10	2.48	5	65	160	1745	6.97	< 10	0.19	3.12	860	< 5	< 0.01
N113734	208	294	0.29	< 1	4.29	< 10	160	< 5	< 10	1.29	5	60	160	2610	7.07	< 10	0.24	3.66	810	< 5	< 0.01
N113735	208	294	0.25	< 1	4.47	< 10	3820	< 5	< 10	0.87	5	70	180	2240	7.98	< 10	0.27	4.04	920	< 5	< 0.01
N113736	208	294	1.95	< 1	6.01	< 10	2680	< 5	< 10	0.71	5	165	240	17360	11.90	10	0.07	5.21	1300	< 5	0.01

CERTIFICATION: Ian Bichler

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CERTIFICATE OF ANALYSIS A9743716

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113722	208	294	90	100	< 5	< 10	15	5	0.03	< 20	< 20	160	< 20	1540
N113723	208	294	70	300	10	< 10	25	5	0.03	< 20	< 20	120	< 20	475
N113724	208	294	75	400	20	< 10	25	5	0.03	< 20	< 20	120	< 20	575
N113725	208	294	75	300	15	< 10	30	5	0.02	< 20	< 20	120	< 20	1150
N113726	208	294	100	400	< 5	< 10	25	5	0.07	< 20	< 20	180	< 20	995
N113727	208	294	95	400	< 5	< 10	25	5	0.05	< 20	< 20	160	< 20	2570
N113728	208	294	85	300	< 5	< 10	25	5	0.02	< 20	< 20	160	< 20	2660
N113729	208	294	85	300	< 5	< 10	15	15	0.25	< 20	< 20	140	< 20	1185
N113730	208	294	80	200	< 5	< 10	20	5	0.09	< 20	< 20	120	< 20	1225
N113731	208	294	90	300	< 5	< 10	20	20	0.23	< 20	< 20	140	< 20	1800
N113732	208	294	80	300	< 5	< 10	15	35	0.02	< 20	< 20	80	< 20	6820
N113733	208	294	100	300	< 5	< 10	15	10	0.33	< 20	< 20	120	< 20	1180
N113734	208	294	100	400	< 5	< 10	15	25	0.39	< 20	< 20	120	< 20	1155
N113735	208	294	100	400	< 5	< 10	15	60	0.34	< 20	< 20	120	< 20	1165
N113736	208	294	85	300	< 5	< 10	15	65	0.13	< 20	< 20	160	< 20	1115

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CERTIFICATE OF ANALYSIS A9743714

SAMPLE	PREP CODE		Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N113864	208	294	0.09	5	0.02	20	20	< 5	< 10	0.03	< 5	30	100	795	20.0	< 10	< 0.01	0.01	< 10	15	0.02
N113865	208	294	2.96	6	< 0.01	30	20	< 5	< 10	0.02	< 5	210	120	26000	23.7	< 10	< 0.01	< 0.01	20	15	0.01
N113866	208	294	4.24	3	< 0.01	40	20	< 5	< 10	0.02	< 5	190	80	37800	23.6	< 10	< 0.01	< 0.01	30	5	0.01
N113867	208	294	3.72	4	< 0.01	40	20	< 5	< 10	0.02	15	210	70	33300	27.3	< 10	< 0.01	< 0.01	40	15	0.01
N113868	208	294	5.78	6	< 0.01	20	< 20	< 5	< 10	0.03	30	275	70	>50000	28.3	10	< 0.01	< 0.01	20	25	0.01
N113869	208	294	11.60	9	< 0.01	40	< 20	< 5	< 10	0.03	60	580	40	>50000	24.4	10	0.01	< 0.01	30	30	< 0.01
N113870	208	294	3.78	< 1	0.35	20	420	< 5	< 10	0.03	< 5	165	110	36100	13.35	< 10	0.47	0.03	< 10	50	0.02
N113871	208	294	3.97	< 1	0.55	20	220	< 5	< 10	0.03	< 5	220	110	37600	13.45	< 10	0.59	0.04	< 10	25	0.01
N113872	208	294	2.32	< 1	5.04	< 10	80	< 5	< 10	0.06	< 5	140	210	22700	13.50	< 10	0.50	1.81	370	< 5	0.02
N113873	208	294	2.87	< 1	6.21	< 10	40	< 5	< 10	0.07	< 5	150	240	27100	14.90	< 10	0.28	2.57	550	< 5	0.01
N113874	208	294	4.26	3	4.44	< 10	40	< 5	< 10	0.06	< 5	610	190	41100	22.6	< 10	0.27	2.03	370	10	0.01
N113875	208	294	4.09	7	4.35	10	20	< 5	< 10	0.09	< 5	590	190	38900	>30.0	< 10	0.13	2.13	350	80	0.01
N113876	208	294	4.37	7	1.69	10	80	< 5	< 10	0.15	20	425	160	42300	25.4	< 10	0.10	0.45	50	85	0.01
N113877	208	294	2.26	1	3.75	< 10	580	< 5	< 10	0.18	< 5	130	80	21700	9.89	10	0.09	1.23	340	5	0.03
N113878	208	294	3.57	3	1.39	20	< 20	< 5	< 10	0.07	20	245	110	33800	14.65	< 10	0.03	0.54	60	15	0.01
N113879	208	294	2.87	1	2.22	40	20	< 5	< 10	0.10	< 5	215	150	27900	15.45	< 10	< 0.01	0.52	60	5	0.01
N113880	208	294	1.30	1	2.73	60	< 20	< 5	< 10	0.10	< 5	320	130	12500	18.90	10	0.05	0.83	120	20	0.01
N113881	208	294	1.00	< 1	3.48	60	20	< 5	< 10	0.12	< 5	260	100	9540	12.65	< 10	0.11	1.19	230	20	0.02
N113882	208	294	1.05	1	2.23	< 10	< 20	< 5	< 10	0.10	10	325	140	10400	18.20	< 10	0.05	0.98	450	30	0.01
N113883	208	294	1.07	< 1	1.92	< 10	< 20	< 5	< 10	0.16	30	160	140	10290	12.70	< 10	0.01	1.28	1010	10	0.01
N113884	208	294	0.39	< 1	3.37	< 10	20	< 5	< 10	0.20	35	205	160	3630	14.70	< 10	0.09	1.89	1660	5	0.01

CERTIFICATION: Stewart Bradley

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

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CERTIFICATE OF ANALYSIS A9743714

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113864	208	294	5	< 100	45	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	330
N113865	208	294	15	< 100	75	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	455
N113866	208	294	15	< 100	90	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	805
N113867	208	294	15	< 100	95	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	2540
N113868	208	294	10	100	60	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	7030
N113869	208	294	15	< 100	135	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	10090
N113870	208	294	75	< 100	65	10	< 5	5	0.02	< 20	< 20	< 20	< 20	195
N113871	208	294	50	< 100	70	< 10	< 5	< 5	0.01	< 20	< 20	20	< 20	65
N113872	208	294	55	100	30	< 10	15	5	< 0.01	< 20	< 20	180	< 20	340
N113873	208	294	55	< 100	5	10	20	5	< 0.01	< 20	< 20	240	< 20	375
N113874	208	294	60	100	30	< 10	15	< 5	< 0.01	< 20	< 20	180	< 20	420
N113875	208	294	50	300	55	10	15	< 5	< 0.01	< 20	< 20	220	< 20	2260
N113876	208	294	40	< 100	40	< 10	5	< 5	< 0.01	< 20	< 20	140	< 20	6120
N113877	208	294	15	100	30	< 10	20	5	< 0.01	< 20	< 20	160	< 20	2320
N113878	208	294	20	< 100	65	< 10	5	< 5	< 0.01	< 20	< 20	80	< 20	8420
N113879	208	294	20	< 100	30	< 10	5	< 5	0.01	< 20	< 20	120	< 20	2540
N113880	208	294	35	100	20	< 10	10	< 5	< 0.01	< 20	< 20	120	< 20	1545
N113881	208	294	35	100	< 5	10	15	< 5	< 0.01	< 20	< 20	120	< 20	2850
N113882	208	294	25	100	25	< 10	5	< 5	< 0.01	< 20	< 20	80	< 20	3650
N113883	208	294	25	100	25	< 10	15	< 5	< 0.01	< 20	< 20	120	< 20	4190
N113884	208	294	40	300	5	< 10	20	< 5	< 0.01	< 20	< 20	180	< 20	6530

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

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CERTIFICATE OF ANALYSIS A9743713

SAMPLE	PREP CODE		Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N113836	208	226	0.92	< 1	4.65	< 10	20	< 5	< 10	0.66	< 5	100	100	8690	14.95	< 10	< 0.01	4.34	1240	< 5	< 0.01
N113837	208	226	0.24	< 1	2.92	< 10	20	< 5	< 10	1.85	< 5	90	70	2330	8.91	< 10	< 0.01	2.79	1370	5	< 0.01
N113838	208	226	0.04	< 1	2.27	< 10	40	< 5	< 10	2.69	< 5	55	50	355	6.69	< 10	< 0.01	2.04	1200	< 5	0.01
N113839	208	226	0.12	< 1	3.41	< 10	60	< 5	< 10	1.96	< 5	60	70	1170	7.85	< 10	< 0.01	3.28	1490	< 5	< 0.01
N113840	208	226	0.09	< 1	3.03	< 10	120	< 5	< 10	2.07	< 5	50	60	830	5.64	< 10	< 0.01	2.80	1180	< 5	0.01
N113841	208	226	0.03	< 1	3.14	< 10	120	< 5	< 10	3.58	< 5	55	80	295	5.40	< 10	0.02	2.67	1540	< 5	0.02
N113842	208	226	0.11	< 1	4.30	< 10	120	< 5	< 10	1.33	< 5	95	170	970	7.55	< 10	0.18	4.73	1950	< 5	< 0.01
N113843	208	226	0.67	< 1	4.15	< 10	320	< 5	< 10	1.66	5	140	170	6300	12.15	< 10	0.06	3.78	2210	< 5	< 0.01
N113844	208	226	0.56	< 1	3.80	< 10	120	< 5	< 10	1.11	< 5	85	140	5200	9.41	< 10	0.05	3.66	1490	< 5	< 0.01
N113845	208	226	0.53	< 1	3.41	< 10	180	< 5	< 10	4.53	< 5	70	90	4890	7.48	< 10	< 0.01	2.78	1500	< 5	0.01
N113846	208	226	0.42	< 1	3.07	< 10	120	< 5	< 10	3.17	5	80	80	4000	7.21	< 10	0.01	2.52	1480	< 5	0.01
N113847	208	226	0.63	< 1	3.61	< 10	160	< 5	< 10	2.48	5	80	100	5940	7.71	< 10	0.06	3.08	1570	< 5	< 0.01
N113848	208	226	0.50	< 1	4.03	< 10	280	< 5	< 10	1.75	< 5	85	140	4620	7.76	< 10	0.19	3.24	1330	< 5	0.04
N113849	208	226	1.03	< 1	4.11	< 10	260	< 5	< 10	0.55	< 5	105	160	9510	9.50	10	0.05	3.61	1250	< 5	0.05
N113850	208	226	0.26	< 1	3.50	< 10	1480	< 5	< 10	2.22	5	65	90	2420	6.81	< 10	0.04	3.27	1220	< 5	< 0.01
N113851	208	226	1.08	< 1	3.90	< 10	160	< 5	< 10	1.41	< 5	80	90	9960	8.06	< 10	0.25	3.83	1160	< 5	< 0.01
N113852	208	226	1.76	< 1	4.58	< 10	800	< 5	< 10	0.53	< 5	100	130	16190	10.50	< 10	0.26	4.32	1270	< 5	< 0.01
N113853	208	226	0.92	< 1	4.31	< 10	640	< 5	< 10	0.96	< 5	95	180	8590	9.86	< 10	0.04	4.74	1170	< 5	< 0.01
N113854	208	226	0.85	< 1	4.70	< 10	360	< 5	< 10	0.58	< 5	110	180	7860	10.90	< 10	0.05	5.29	1400	< 5	< 0.01
N113855	208	226	1.43	< 1	4.46	< 10	400	< 5	< 10	0.69	< 5	105	170	13570	10.45	< 10	< 0.01	4.90	1140	< 5	< 0.01
N113856	208	226	1.27	< 1	4.36	< 10	420	< 5	< 10	0.71	< 5	110	170	11700	10.30	< 10	0.08	4.34	1060	< 5	< 0.01
N113857	208	226	0.31	< 1	3.88	< 10	300	< 5	< 10	1.60	5	75	110	2810	8.04	< 10	0.14	3.79	1150	< 5	< 0.01
N113858	208	226	0.41	< 1	4.11	< 10	340	< 5	< 10	1.62	5	70	130	3680	7.84	< 10	0.13	3.92	970	< 5	< 0.01
N113859	208	226	0.28	< 1	4.34	< 10	400	< 5	< 10	1.62	5	70	100	2620	9.18	< 10	0.09	4.12	1140	< 5	< 0.01
N113860	208	226	0.31	< 1	4.45	< 10	280	< 5	< 10	1.25	15	85	100	2810	10.05	< 10	0.03	4.37	1220	< 5	< 0.01
N113861	208	226	0.70	< 1	4.60	< 10	140	< 5	< 10	0.93	20	135	110	6230	12.60	< 10	0.06	4.20	1690	< 5	< 0.01

CERTIFICATION: B. Caplin

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

Project : ICE-IC97-56
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CERTIFICATE OF ANALYSIS A9743713

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113836	208	226	55	600	< 5	< 10	20	5	0.52	< 20	< 20	300	< 20	990
N113837	208	226	60	400	< 5	< 10	15	10	0.56	< 20	< 20	220	< 20	760
N113838	208	226	70	400	< 5	< 10	10	15	0.47	< 20	< 20	140	< 20	255
N113839	208	226	50	400	< 5	< 10	15	20	0.52	< 20	< 20	220	< 20	530
N113840	208	226	50	400	< 5	< 10	10	25	0.48	< 20	< 20	160	< 20	355
N113841	208	226	40	300	5	< 10	10	15	0.41	< 20	< 20	160	< 20	315
N113842	208	226	80	300	< 5	< 10	20	30	0.59	< 20	< 20	180	< 20	770
N113843	208	226	70	300	< 5	< 10	25	15	0.49	< 20	< 20	220	< 20	2710
N113844	208	226	60	300	5	< 10	20	25	0.42	< 20	< 20	180	< 20	1640
N113845	208	226	80	700	< 5	< 10	15	25	0.42	< 20	< 20	140	< 20	975
N113846	208	226	55	900	< 5	< 10	15	15	0.52	< 20	< 20	200	< 20	1140
N113847	208	226	50	400	< 5	< 10	20	25	0.56	< 20	< 20	220	< 20	1095
N113848	208	226	60	300	< 5	< 10	30	20	0.23	< 20	< 20	260	< 20	1310
N113849	208	226	75	500	< 5	< 10	35	5	0.14	< 20	< 20	280	< 20	1765
N113850	208	226	80	700	< 5	< 10	20	40	0.57	< 20	< 20	220	< 20	770
N113851	208	226	50	400	< 5	< 10	25	5	0.60	< 20	< 20	240	< 20	1180
N113852	208	226	70	200	< 5	< 10	30	20	0.29	< 20	< 20	220	< 20	1620
N113853	208	226	70	400	10	< 10	40	15	0.66	< 20	< 20	320	< 20	1680
N113854	208	226	80	400	< 5	< 10	35	5	0.35	< 20	< 20	320	< 20	2110
N113855	208	226	70	400	< 5	< 10	40	5	0.46	< 20	< 20	340	< 20	2130
N113856	208	226	65	400	< 5	< 10	40	10	0.39	< 20	< 20	340	< 20	2520
N113857	208	226	45	400	< 5	< 10	30	15	0.68	< 20	< 20	280	< 20	2020
N113858	208	226	50	400	< 5	< 10	30	40	0.56	< 20	< 20	280	< 20	1590
N113859	208	226	50	400	< 5	< 10	25	40	0.66	< 20	< 20	260	< 20	1190
N113860	208	226	50	400	< 5	< 10	20	95	0.60	< 20	< 20	260	< 20	1205
N113861	208	226	50	400	< 5	< 10	25	25	0.48	< 20	< 20	320	< 20	2430

CERTIFICATION: B. Caplin

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

Project : ICE-IC97-56
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CERTIFICATE OF ANALYSIS A9743710

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
N113813	205	226	0.6	1.30	6	140	< 0.5	< 2	0.29	< 0.5	14	260	1730	>15.00	10	< 1	0.11	< 10	0.39	60	1
N113814	205	226	0.8	2.67	6	210	< 0.5	< 2	0.41	< 0.5	31	245	2030	14.55	10	< 1	0.08	< 10	1.18	80	< 1
N113815	205	226	0.4	4.22	4	230	< 0.5	< 2	0.49	< 0.5	43	207	2510	12.75	10	< 1	0.04	< 10	2.10	115	< 1
N113816	205	226	0.6	4.57	< 2	260	< 0.5	< 2	0.52	< 0.5	38	203	2950	11.35	10	< 1	0.05	< 10	2.12	105	< 1
N113817	205	226	1.8	4.46	2	290	< 0.5	< 2	0.54	< 0.5	35	167	2620	9.88	10	< 1	0.03	< 10	2.37	130	< 1
N113818	205	226	2.4	4.47	2	320	< 0.5	< 2	0.48	< 0.5	27	200	2420	9.28	10	1	0.03	< 10	1.87	150	< 1
N113819	205	226	4.2	4.66	6	220	< 0.5	< 2	0.62	< 0.5	20	265	1930	7.71	10	< 1	0.01	< 10	1.39	165	< 1
N113820	205	226	4.2	2.83	2	160	< 0.5	< 2	0.50	< 0.5	21	317	2470	11.20	20	< 1	0.02	< 10	1.07	135	1
N113821	205	226	7.8	1.01	28	130	< 0.5	< 2	0.17	0.5	9	137	1865	14.00	< 10	< 1	0.21	< 10	0.34	40	13
N113822	205	226	< 0.2	4.66	< 2	230	< 0.5	< 2	0.59	< 0.5	27	184	1885	7.27	10	< 1	0.05	< 10	1.57	290	< 1
N113823	205	226	1.4	2.49	14	190	< 0.5	2	0.33	< 0.5	22	168	3250	13.25	10	< 1	0.13	< 10	0.65	115	13
N113824	205	226	2.6	0.48	30	150	< 0.5	14	0.13	< 0.5	11	150	1930	13.10	10	< 1	0.28	< 10	0.13	45	100
N113825	205	226	< 0.2	2.03	8	110	< 0.5	< 2	0.33	< 0.5	35	205	4260	13.30	10	< 1	0.01	< 10	0.57	185	4
N113826	205	226	< 0.2	3.43	10	330	< 0.5	< 2	0.45	0.5	43	165	2820	8.47	10	< 1	0.03	< 10	1.63	490	< 1
N113827	205	226	< 0.2	2.64	< 2	580	< 0.5	< 2	0.33	< 0.5	29	166	3060	7.88	< 10	< 1	0.01	< 10	1.26	340	< 1
N113828	205	226	< 0.2	3.62	< 2	1240	< 0.5	< 2	0.84	2.0	34	169	3040	7.41	< 10	< 1	0.03	< 10	1.94	530	< 1
N113829	205	226	< 0.2	3.16	< 2	370	< 0.5	< 2	1.56	3.0	32	147	2850	5.58	< 10	< 1	0.02	< 10	2.00	570	< 1
N113830	205	226	< 0.2	3.54	< 2	150	< 0.5	< 2	2.46	4.0	25	105	3570	4.72	< 10	< 1	0.07	< 10	1.77	595	< 1
N113831	205	226	< 0.2	3.77	2	70	< 0.5	< 2	2.03	3.5	26	172	2430	5.45	10	< 1	0.05	< 10	2.13	630	< 1
N113832	205	226	< 0.2	3.28	2	120	< 0.5	< 2	1.47	2.5	26	141	2270	5.52	< 10	< 1	0.07	< 10	2.01	570	< 1
N113833	205	226	< 0.2	3.37	2	120	< 0.5	< 2	1.00	2.5	36	164	2570	6.89	< 10	1	0.06	< 10	2.09	535	< 1
N113834	205	226	0.4	3.26	2	< 10	< 0.5	< 2	0.23	< 0.5	160	128	6410	>15.00	< 10	< 1	0.08	< 10	2.04	250	6
N113835	205	226	0.2	3.35	6	10	< 0.5	Intf*	0.21	0.5	133	123	>10000	14.25	< 10	1	0.08	< 10	2.12	320	6

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* INTERFERENCES: Cu on Bi and P

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 : ICE-IC97-56
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CERTIFICATE OF ANALYSIS A9743710

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
N113813	205	226	0.01	7	70	30	< 2	5	10	< 0.01	< 10	10	145	< 10	66
N113814	205	226	< 0.01	16	70	26	< 2	8	11	0.01	< 10	10	135	< 10	190
N113815	205	226	< 0.01	23	70	12	< 2	12	9	< 0.01	< 10	10	131	< 10	300
N113816	205	226	< 0.01	28	90	12	2	12	7	< 0.01	< 10	< 10	123	< 10	358
N113817	205	226	< 0.01	29	50	12	< 2	13	7	< 0.01	< 10	< 10	110	< 10	398
N113818	205	226	0.01	34	130	6	2	15	7	0.08	< 10	< 10	136	< 10	562
N113819	205	226	0.01	36	140	10	2	15	8	0.14	< 10	< 10	176	< 10	330
N113820	205	226	0.03	29	200	10	2	16	9	0.14	< 10	< 10	218	< 10	290
N113821	205	226	0.30	7	180	112	< 2	6	38	0.13	< 10	10	122	< 10	132
N113822	205	226	0.01	38	140	< 2	< 2	17	33	0.14	< 10	< 10	120	< 10	458
N113823	205	226	0.16	17	210	92	< 2	14	24	0.09	< 10	10	135	< 10	470
N113824	205	226	0.19	3	200	130	< 2	7	21	0.09	< 10	< 10	125	< 10	334
N113825	205	226	0.01	17	240	22	< 2	12	5	0.05	< 10	10	190	< 10	1220
N113826	205	226	< 0.01	42	190	2	< 2	20	7	0.10	< 10	< 10	125	< 10	1040
N113827	205	226	0.01	36	140	6	< 2	20	12	0.05	< 10	< 10	140	< 10	652
N113828	205	226	0.01	47	190	2	< 2	23	15	0.10	< 10	< 10	140	< 10	624
N113829	205	226	0.01	54	180	< 2	< 2	17	8	0.16	< 10	< 10	106	< 10	422
N113830	205	226	0.01	51	180	2	< 2	13	6	0.18	< 10	< 10	90	< 10	216
N113831	205	226	0.01	55	150	< 2	< 2	19	6	0.19	< 10	< 10	111	< 10	242
N113832	205	226	0.01	52	170	< 2	< 2	18	6	0.18	< 10	< 10	101	< 10	280
N113833	205	226	0.01	49	220	2	< 2	20	5	0.19	< 10	< 10	116	< 10	468
N113834	205	226	< 0.01	39	50	16	< 2	11	1	0.09	< 10	10	85	< 10	454
N113835	205	226	< 0.01	38	Intf*	20	< 2	10	2	0.10	< 10	10	95	< 10	392

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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

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

Project : ICE-IC97-59
Comments:

Page : 1-A
Total Pages : 1
Certificate Date: 29-SEP-97
Invoice No. : I9743708
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9743708

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
N113976	205	226	3.8	2.50	8	120	< 0.5	< 2	0.44	< 0.5	25	134	4850	>15.00	10	< 1	0.02	< 10	0.53	110	< 1
N113977	205	226	1.4	4.88	2	230	< 0.5	< 2	0.53	< 0.5	30	111	2970	8.86	< 10	< 1	0.04	< 10	1.57	380	< 1
N113978	205	226	0.6	5.15	4	1380	< 0.5	< 2	0.36	< 0.5	40	106	1930	9.83	10	< 1	< 0.01	< 10	3.15	885	< 1
N113979	205	226	0.4	4.43	8	430	< 0.5	< 2	0.65	< 0.5	43	103	2490	8.70	< 10	< 1	0.01	< 10	2.99	810	< 1
N113980	205	226	0.2	4.25	6	220	< 0.5	< 2	0.96	< 0.5	33	88	1710	9.95	< 10	< 1	< 0.01	< 10	3.47	1120	< 1
N113981	205	226	< 0.2	5.03	6	460	< 0.5	< 2	0.79	< 0.5	38	115	2050	10.80	10	< 1	< 0.01	< 10	4.24	1380	< 1
N113982	205	226	< 0.2	4.02	2	290	< 0.5	< 2	1.17	1.5	57	177	3390	9.23	10	< 1	< 0.01	< 10	3.00	965	< 1
N113983	205	226	< 0.2	3.36	6	870	< 0.5	< 2	1.72	2.5	43	132	2630	7.33	< 10	< 1	< 0.01	< 10	2.35	850	< 1
N113984	205	226	< 0.2	2.82	< 2	440	< 0.5	< 2	1.64	2.0	40	101	3080	5.67	< 10	< 1	0.04	< 10	2.18	1110	< 1
N113985	205	226	< 0.2	2.95	2	100	< 0.5	< 2	1.87	5.5	62	77	4400	7.38	< 10	< 1	0.01	< 10	1.89	1025	< 1
N113986	205	226	< 0.2	2.12	6	60	< 0.5	< 2	0.49	0.5	138	71	7050	11.25	< 10	< 1	0.08	< 10	0.95	875	< 1
N113987	205	226	< 0.2	2.78	< 2	40	< 0.5	< 2	1.43	4.5	75	89	5960	8.96	< 10	< 1	0.03	< 10	1.95	1050	< 1
N113988	205	226	< 0.2	3.15	< 2	510	< 0.5	< 2	1.43	2.0	44	100	2800	6.57	< 10	< 1	< 0.01	< 10	2.80	1010	< 1
N113989	205	226	< 0.2	3.56	< 2	250	< 0.5	< 2	1.92	1.5	67	107	6090	7.11	10	< 1	< 0.01	< 10	3.49	740	< 1
N113990	205	226	< 0.2	2.91	6	110	< 0.5	< 2	1.51	0.5	28	72	2730	5.55	< 10	< 1	< 0.01	< 10	2.73	620	< 1
N113991	205	226	< 0.2	3.07	< 2	190	< 0.5	< 2	1.41	1.0	63	70	599	6.28	< 10	< 1	0.04	< 10	2.96	725	< 1
N113992	205	226	< 0.2	2.88	2	90	< 0.5	< 2	1.19	< 0.5	51	77	87	5.86	< 10	< 1	< 0.01	< 10	2.97	720	< 1
N113993	205	226	< 0.2	2.65	< 2	60	< 0.5	< 2	1.52	< 0.5	35	45	84	4.83	< 10	< 1	< 0.01	< 10	2.48	700	< 1
N113994	205	226	< 0.2	2.82	< 2	130	< 0.5	< 2	0.97	< 0.5	44	59	407	5.41	< 10	< 1	0.02	< 10	2.75	940	< 1
N113995	205	226	< 0.2	3.50	6	60	< 0.5	< 2	1.35	0.5	49	72	326	6.07	< 10	< 1	0.02	< 10	3.12	1145	< 1
N113996	205	226	< 0.2	3.04	10	50	< 0.5	< 2	1.24	1.5	54	82	2240	6.42	< 10	< 1	< 0.01	< 10	2.51	890	< 1
N113997	205	226	0.2	4.80	< 2	100	< 0.5	< 2	0.68	1.5	74	131	4840	10.55	10	< 1	0.05	< 10	3.43	1005	< 1
N113998	205	226	0.6	5.12	8	40	< 0.5	< 2	0.39	1.5	81	122	4540	11.80	< 10	< 1	0.05	< 10	3.66	1070	< 1
N113999	205	226	4.0	4.97	2	30	< 0.5	< 2	0.35	< 0.5	96	130	7780	12.20	10	< 1	0.01	< 10	3.68	1065	< 1
N114000	205	226	0.2	5.00	< 2	50	< 0.5	< 2	0.42	0.5	41	119	1475	9.89	10	< 1	0.02	< 10	4.22	1145	< 1
N114001	205	226	0.6	5.43	4	50	< 0.5	< 2	0.43	3.5	78	135	2800	11.60	10	< 1	< 0.01	< 10	4.22	1165	< 1
N114002	205	226	< 0.2	5.16	< 2	120	< 0.5	< 2	0.58	1.5	46	128	744	9.39	10	< 1	0.01	< 10	4.55	1265	< 1
N114003	205	226	0.2	4.97	< 2	200	< 0.5	< 2	1.04	5.0	48	91	2470	8.53	< 10	< 1	0.06	< 10	4.18	1265	< 1
N114004	205	226	< 0.2	4.71	< 2	70	< 0.5	< 2	0.80	2.0	49	124	568	8.09	10	< 1	0.01	< 10	4.45	1360	< 1

CERTIFICATION: Ian Bradley

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 : ICE-IC97-59
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 29-SEP-97
Invoice No. : I9743708
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9743708

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
N113976	205	226	< 0.01	16	150	12	< 2	14	8	0.12	< 10	< 10	211	< 10	232
N113977	205	226	< 0.01	31	200	4	< 2	23	12	0.13	< 10	< 10	195	< 10	374
N113978	205	226	< 0.01	45	170	< 2	< 2	30	15	0.13	< 10	< 10	198	< 10	872
N113979	205	226	< 0.01	46	160	< 2	< 2	27	12	0.21	< 10	< 10	175	< 10	682
N113980	205	226	< 0.01	39	280	< 2	< 2	17	7	0.29	< 10	< 10	152	< 10	630
N113981	205	226	< 0.01	51	370	< 2	< 2	23	16	0.38	< 10	< 10	169	< 10	794
N113982	205	226	< 0.01	63	280	< 2	< 2	24	23	0.25	< 10	< 10	157	< 10	642
N113983	205	226	< 0.01	50	270	< 2	< 2	21	30	0.24	< 10	< 10	156	< 10	324
N113984	205	226	< 0.01	50	270	< 2	< 2	10	18	0.25	< 10	< 10	108	< 10	260
N113985	205	226	< 0.01	53	280	< 2	2	19	9	0.16	< 10	< 10	133	< 10	572
N113986	205	226	< 0.01	55	290	2	2	19	7	< 0.01	< 10	< 10	116	< 10	1280
N113987	205	226	< 0.01	50	270	< 2	2	22	7	0.20	< 10	< 10	175	< 10	662
N113988	205	226	< 0.01	49	260	< 2	< 2	16	13	0.29	< 10	< 10	164	< 10	492
N113989	205	226	< 0.01	63	240	< 2	< 2	24	15	0.29	< 10	< 10	197	< 10	568
N113990	205	226	< 0.01	41	280	< 2	2	13	8	0.28	< 10	< 10	143	< 10	208
N113991	205	226	< 0.01	53	310	< 2	2	16	9	0.30	< 10	< 10	160	< 10	428
N113992	205	226	< 0.01	46	270	< 2	< 2	12	8	0.29	< 10	< 10	138	< 10	208
N113993	205	226	< 0.01	36	300	< 2	< 2	8	7	0.27	< 10	< 10	110	< 10	116
N113994	205	226	< 0.01	38	310	< 2	< 2	9	6	0.31	< 10	< 10	124	< 10	278
N113995	205	226	< 0.01	42	310	< 2	< 2	9	8	0.32	< 10	< 10	140	< 10	354
N113996	205	226	< 0.01	46	320	< 2	< 2	14	6	0.35	< 10	< 10	156	< 10	916
N113997	205	226	< 0.01	63	280	< 2	< 2	23	8	0.35	< 10	< 10	227	< 10	1130
N113998	205	226	< 0.01	49	280	< 2	< 2	15	3	0.23	< 10	< 10	182	< 10	428
N113999	205	226	< 0.01	44	240	2	< 2	14	3	0.18	< 10	< 10	184	< 10	268
N114000	205	226	< 0.01	46	280	< 2	< 2	15	2	0.25	< 10	< 10	188	< 10	446
N114001	205	226	< 0.01	48	300	< 2	2	18	3	0.25	< 10	< 10	216	< 10	556
N114002	205	226	< 0.01	48	340	< 2	< 2	18	4	0.33	< 10	< 10	197	< 10	658
N114003	205	226	< 0.01	45	330	< 2	< 2	15	7	0.37	< 10	< 10	182	< 10	646
N114004	205	226	< 0.01	49	340	< 2	< 2	16	5	0.40	< 10	< 10	199	< 10	836

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

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

Project : ICE-IC97-58
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 29-SEP-97
Invoice No. : I9743707
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9743707

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
N113742	205	226	1.4	3.19	< 2	500	< 0.5	< 2	0.48	< 0.5	23	158	1635	6.60	< 10	< 1	0.10	< 10	1.84	250	< 1
N113743	205	226	2.0	3.41	4	480	< 0.5	< 2	0.47	< 0.5	72	130	3870	11.55	< 10	< 1	0.07	< 10	1.36	345	< 1
N113744	205	226	0.8	4.18	6	490	< 0.5	< 2	0.47	< 0.5	26	102	2090	7.31	< 10	< 1	0.04	< 10	2.52	515	< 1
N113745	205	226	0.4	3.09	< 2	240	< 0.5	< 2	1.07	0.5	16	87	890	5.12	< 10	< 1	0.04	< 10	2.21	555	< 1
N113746	205	226	0.6	3.47	< 2	290	< 0.5	< 2	1.25	< 0.5	13	104	1065	5.97	< 10	< 1	0.05	< 10	2.25	505	< 1
N113747	205	226	0.2	3.46	< 2	200	< 0.5	< 2	1.26	< 0.5	16	124	885	5.81	< 10	< 1	0.06	< 10	2.47	585	< 1
N113748	205	226	0.6	3.08	< 2	210	< 0.5	< 2	1.40	0.5	13	97	835	5.16	< 10	< 1	0.08	< 10	2.01	490	< 1
N113749	205	226	0.4	2.92	< 2	140	< 0.5	< 2	1.19	1.5	15	135	1145	5.79	< 10	< 1	0.01	< 10	1.96	445	< 1
N113750	205	226	0.2	4.30	< 2	190	< 0.5	< 2	0.63	< 0.5	19	141	1650	8.67	< 10	2	0.02	< 10	3.26	770	< 1
N113901	205	226	0.8	4.55	< 2	140	< 0.5	< 2	0.40	< 0.5	27	178	3220	10.65	< 10	< 1	0.02	< 10	3.17	820	< 1
N113902	205	226	< 0.2	4.70	< 2	300	< 0.5	< 2	0.74	1.0	34	182	2080	7.81	< 10	< 1	< 0.01	< 10	3.43	835	< 1
N113903	205	226	< 0.2	4.26	< 2	80	< 0.5	< 2	0.80	1.5	26	160	1535	6.91	< 10	< 1	< 0.01	< 10	3.74	850	< 1
N113904	205	226	< 0.2	4.19	2	100	< 0.5	< 2	0.68	1.0	29	168	1565	7.36	< 10	< 1	< 0.01	< 10	3.62	785	< 1
N113905	205	226	< 0.2	3.95	6	610	< 0.5	< 2	0.45	< 0.5	33	152	2350	8.27	< 10	< 1	< 0.01	< 10	3.51	770	< 1
N113906	205	226	< 0.2	4.04	4	420	< 0.5	< 2	0.62	0.5	28	139	1475	7.07	< 10	< 1	< 0.01	< 10	3.96	845	< 1
N113907	205	226	< 0.2	3.16	< 2	170	< 0.5	< 2	1.62	2.5	36	65	1770	5.34	< 10	< 1	0.04	< 10	2.50	620	< 1
N113908	205	226	< 0.2	3.19	< 2	80	< 0.5	< 2	1.55	< 0.5	46	116	477	5.03	< 10	< 1	0.07	< 10	2.71	770	< 1
N113909	205	226	< 0.2	3.31	4	170	< 0.5	< 2	1.91	< 0.5	39	124	2310	4.94	< 10	< 1	0.07	< 10	2.68	745	< 1
N113910	205	226	< 0.2	3.07	6	70	< 0.5	< 2	2.84	< 0.5	29	98	220	4.47	< 10	< 1	0.03	< 10	2.15	680	< 1
N113911	205	226	< 0.2	3.28	< 2	350	< 0.5	< 2	2.48	0.5	45	116	1080	5.18	< 10	< 1	0.02	< 10	2.28	735	< 1
N113912	205	226	< 0.2	2.84	< 2	160	< 0.5	< 2	4.26	< 0.5	34	65	750	4.77	10	< 1	< 0.01	< 10	1.24	575	< 1
N113913	205	226	< 0.2	2.16	< 2	70	< 0.5	< 2	2.54	< 0.5	27	40	83	3.92	< 10	< 1	< 0.01	< 10	1.55	605	< 1
N113914	205	226	< 0.2	3.74	< 2	330	< 0.5	< 2	1.26	< 0.5	61	119	3700	7.28	< 10	< 1	0.04	< 10	3.44	1250	< 1
N113915	205	226	< 0.2	3.23	2	360	< 0.5	< 2	1.64	< 0.5	42	110	128	5.39	< 10	< 1	0.01	< 10	3.04	950	< 1
N113916	205	226	< 0.2	2.26	< 2	140	< 0.5	< 2	1.76	< 0.5	28	37	70	4.45	< 10	< 1	0.01	< 10	1.80	665	< 1
N113917	205	226	< 0.2	2.40	< 2	150	< 0.5	< 2	1.28	< 0.5	34	52	226	5.13	< 10	< 1	< 0.01	< 10	2.26	840	< 1
N113918	205	226	< 0.2	2.72	< 2	230	< 0.5	< 2	1.90	< 0.5	37	62	259	5.40	10	< 1	< 0.01	< 10	2.27	715	< 1

CERTIFICATION: Ian Bachler

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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CERTIFICATE OF ANALYSIS A9743707

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
N113742	205	226	< 0.01	45	100	< 2	< 2	12	9	0.05	< 10	< 10	105	< 10	502
N113743	205	226	< 0.01	35	360	< 2	< 2	19	10	< 0.01	< 10	< 10	159	< 10	1070
N113744	205	226	< 0.01	38	210	< 2	< 2	19	17	0.11	< 10	< 10	197	< 10	650
N113745	205	226	< 0.01	29	230	< 2	< 2	14	8	0.28	< 10	< 10	133	< 10	526
N113746	205	226	< 0.01	28	240	< 2	< 2	19	9	0.31	< 10	< 10	160	< 10	518
N113747	205	226	< 0.01	36	210	< 2	< 2	14	13	0.26	< 10	< 10	131	< 10	386
N113748	205	226	< 0.01	28	200	< 2	< 2	13	13	0.26	< 10	< 10	125	< 10	310
N113749	205	226	< 0.01	29	190	< 2	< 2	14	12	0.25	< 10	< 10	129	< 10	328
N113750	205	226	< 0.01	37	210	< 2	< 2	17	11	0.21	< 10	< 10	169	< 10	680
N113901	205	226	< 0.01	38	220	2	< 2	20	13	0.21	< 10	< 10	182	< 10	476
N113902	205	226	< 0.01	47	210	4	< 2	21	18	0.20	< 10	< 10	187	< 10	674
N113903	205	226	< 0.01	43	210	< 2	< 2	20	6	0.22	< 10	< 10	167	< 10	574
N113904	205	226	< 0.01	45	210	< 2	< 2	16	8	0.26	< 10	< 10	168	< 10	564
N113905	205	226	< 0.01	40	200	< 2	< 2	18	9	0.21	< 10	< 10	171	< 10	682
N113906	205	226	< 0.01	42	240	< 2	< 2	14	6	0.26	< 10	< 10	152	< 10	924
N113907	205	226	< 0.01	40	280	< 2	< 2	13	7	0.25	< 10	< 10	138	< 10	378
N113908	205	226	< 0.01	60	250	< 2	< 2	9	9	0.32	< 10	< 10	117	< 10	236
N113909	205	226	< 0.01	60	250	< 2	< 2	12	11	0.32	< 10	< 10	119	< 10	230
N113910	205	226	< 0.01	41	240	< 2	< 2	10	8	0.27	< 10	< 10	112	< 10	148
N113911	205	226	< 0.01	50	270	< 2	< 2	12	13	0.32	< 10	< 10	130	< 10	242
N113912	205	226	0.01	32	240	< 2	< 2	8	9	0.20	< 10	< 10	119	< 10	214
N113913	205	226	0.01	29	310	< 2	< 2	3	7	0.24	< 10	< 10	96	< 10	102
N113914	205	226	< 0.01	54	270	< 2	< 2	15	12	0.39	< 10	< 10	161	< 10	604
N113915	205	226	< 0.01	53	270	< 2	< 2	8	19	0.34	< 10	< 10	121	< 10	224
N113916	205	226	< 0.01	32	280	< 2	< 2	5	10	0.28	< 10	< 10	106	< 10	130
N113917	205	226	< 0.01	37	300	< 2	< 2	6	7	0.29	< 10	< 10	125	< 10	176
N113918	205	226	< 0.01	40	310	< 2	< 2	8	10	0.24	< 10	< 10	136	< 10	186

CERTIFICATION: David Fowler

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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Y1A 3S9

Project : ICE-IC97-48
Comments:

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Total Pages : 1
Certificate Date: 23-SEP-97
Invoice No. : I9743189
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9743189

SAMPLE	PREP CODE	Cu %
N113556	244 --	0.43

CERTIFICATION: Said Letnard

Chemex Labs Ltd.

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

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Project : ICE-IC97-49
Comments:

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Total Pages : 1
Certificate Date: 19-SEP-97
Invoice No. : I9742860
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742860

SAMPLE	PREP CODE		Cu %
N113616	244	--	1.96

CERTIFICATION: Said Leino

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

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Project : ICE-ID97-31
Comments:

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Total Pages : 1
Certificate Date: 19-SEP-97
Invoice No. : I9742840
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742840

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N113752	244 --	< 5	0.94
N113753	244 --	< 5	0.40

CERTIFICATION: David Chemex

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
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Y1A 3S9

Project : ICE-IC97-52
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Page Number : 1-A
Total Pages : 1
Certificate Date: 23-SEP-97
Invoice No. : I9742544
P.O. Number : NONE
Account : MPO

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CERTIFICATE OF ANALYSIS A9742544

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
N113756	205	226	< 0.2	2.59	< 2	130	< 0.5	< 2	1.42	2.5	51	34	2710	7.59	10	< 1	0.05	< 10	1.47	615	< 1
N113757	205	226	< 0.2	2.61	< 2	120	< 0.5	< 2	1.47	3.0	31	38	3720	6.25	10	< 1	0.04	< 10	1.70	545	< 1
N113758	205	226	< 0.2	2.97	< 2	900	< 0.5	< 2	1.25	2.5	44	112	3950	6.80	10	< 1	0.04	< 10	2.34	690	< 1
N113759	205	226	< 0.2	3.79	< 2	110	< 0.5	< 2	1.46	3.5	39	158	3570	7.39	10	< 1	0.03	< 10	3.03	740	< 1
N113760	205	226	< 0.2	3.73	< 2	360	< 0.5	< 2	0.40	1.5	73	160	5650	9.91	10	< 1	0.08	< 10	2.31	750	< 1
N113761	205	226	< 0.2	3.46	< 2	110	< 0.5	< 2	2.20	3.5	32	92	3330	6.31	10	< 1	0.01	< 10	2.25	655	< 1
N113762	205	226	< 0.2	3.40	< 2	100	< 0.5	< 2	2.09	3.0	32	107	2670	5.50	10	< 1	0.05	< 10	2.43	705	< 1
N113763	205	226	< 0.2	3.57	< 2	120	< 0.5	< 2	2.08	4.5	49	121	4170	7.34	10	< 1	0.09	< 10	2.20	710	< 1
N113764	205	226	< 0.2	3.52	< 2	320	< 0.5	< 2	1.79	3.5	40	116	3150	6.71	10	< 1	0.09	< 10	2.56	655	< 1
N113765	205	226	< 0.2	3.75	< 2	220	< 0.5	< 2	1.38	5.5	34	157	5770	8.25	10	< 1	0.11	< 10	2.60	560	< 1
N113766	205	226	< 0.2	4.02	< 2	110	< 0.5	< 2	2.28	6.0	48	123	6010	8.43	10	< 1	0.08	< 10	2.30	610	< 1
N113767	205	226	< 0.2	4.17	< 2	70	< 0.5	< 2	2.58	9.0	49	149	6620	9.65	10	< 1	0.04	< 10	2.44	620	< 1
N113768	205	226	< 0.2	3.60	< 2	330	< 0.5	< 2	1.94	5.0	49	140	7350	8.59	10	< 1	0.06	< 10	2.59	645	< 1
N113769	205	226	0.8	3.69	< 2	120	< 0.5	Intf*	1.84	6.0	88	136	>10000	9.01	10	< 1	0.05	< 10	2.43	750	< 1
N113770	205	226	< 0.2	3.22	< 2	160	< 0.5	< 2	1.66	4.0	38	134	9090	4.83	10	< 1	0.09	< 10	2.44	660	< 1
N113771	205	226	< 0.2	3.94	< 2	1160	< 0.5	< 2	2.33	4.0	46	162	7710	5.03	10	< 1	0.07	< 10	2.56	720	< 1
N113772	205	226	< 0.2	4.35	< 2	210	< 0.5	< 2	2.85	3.5	80	194	542	5.04	10	< 1	0.11	< 10	2.81	1085	< 1
N113773	205	226	< 0.2	4.98	< 2	720	< 0.5	< 2	3.24	3.0	173	252	2090	9.65	10	< 1	0.06	< 10	3.03	1870	< 1
N113774	205	226	< 0.2	3.54	2	110	< 0.5	< 2	1.55	4.0	243	183	984	11.50	10	< 1	0.15	< 10	1.80	2780	< 1
N113775	205	226	< 0.2	4.57	< 2	120	< 0.5	< 2	3.10	2.5	68	195	1710	5.60	10	< 1	0.06	< 10	2.77	1065	< 1
N113776	205	226	< 0.2	3.60	< 2	110	< 0.5	< 2	1.98	4.5	92	157	2600	6.35	< 10	< 1	0.07	< 10	2.42	1060	< 1
N113777	205	226	< 0.2	2.16	6	1350	< 0.5	< 2	2.23	2.0	247	76	1210	12.65	10	< 1	0.09	< 10	1.65	3120	< 1
N113778	205	226	< 0.2	3.93	< 2	350	< 0.5	< 2	1.19	< 0.5	73	90	137	8.44	10	< 1	0.08	< 10	2.28	1205	< 1
N113779	205	226	< 0.2	3.54	< 2	280	< 0.5	< 2	3.24	0.5	33	77	153	6.21	10	< 1	0.11	< 10	1.84	1180	< 1
N113780	205	226	< 0.2	3.77	< 2	170	< 0.5	< 2	3.56	1.0	33	107	100	6.97	10	< 1	0.01	< 10	2.80	1635	< 1

CERTIFICATION: Stewart Borthwick

* FOR PROJECT DESCRIPTION.

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

Project : ICE-IC97-52
Comments:

Pag er : 1-B
Total ges : 1
Certificate Date: 23-SEP-97
Invoice No. : 19742544
P.O. Number : NONE
Account : MPO

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CERTIFICATE OF ANALYSIS A9742544

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	Cu %
N113756	205	226	0.01	25	570	< 2	< 2	12	21	0.19	< 10	< 10	125	< 10	670	-----
N113757	205	226	0.02	24	640	< 2	< 2	12	15	0.28	< 10	< 10	131	< 10	298	-----
N113758	205	226	0.01	41	370	< 2	< 2	16	31	0.29	< 10	< 10	127	< 10	406	-----
N113759	205	226	< 0.01	49	300	< 2	< 2	22	45	0.30	< 10	< 10	154	< 10	322	-----
N113760	205	226	0.01	52	290	4	< 2	25	61	0.03	< 10	< 10	156	< 10	794	-----
N113761	205	226	< 0.01	38	350	< 2	< 2	13	31	0.33	< 10	< 10	129	< 10	264	-----
N113762	205	226	< 0.01	40	300	< 2	< 2	11	14	0.34	< 10	< 10	126	< 10	176	0.30
N113763	205	226	0.01	44	330	< 2	< 2	20	14	0.30	< 10	< 10	158	< 10	378	0.45
N113764	205	226	< 0.01	46	240	< 2	< 2	18	57	0.27	< 10	< 10	129	< 10	266	0.34
N113765	205	226	< 0.01	44	330	< 2	< 2	26	12	0.24	< 10	< 10	186	< 10	286	0.58
N113766	205	226	< 0.01	41	300	< 2	< 2	20	31	0.24	< 10	< 10	157	< 10	602	0.61
N113767	205	226	< 0.01	45	300	2	< 2	24	11	0.35	< 10	< 10	179	< 10	708	0.68
N113768	205	226	< 0.01	53	220	< 2	< 2	19	61	0.39	< 10	< 10	132	< 10	616	0.75
N113769	205	226	< 0.01	53	Intf*	< 2	< 2	20	18	0.28	< 10	< 10	156	< 10	1180	1.27
N113770	205	226	0.01	72	170	< 2	2	10	6	0.17	< 10	< 10	74	< 10	322	0.97
N113771	205	226	0.01	76	190	< 2	< 2	12	13	0.17	< 10	< 10	91	< 10	434	0.84
N113772	205	226	0.03	76	170	< 2	< 2	13	9	0.17	< 10	< 10	105	< 10	1000	0.06
N113773	205	226	0.01	83	160	2	< 2	21	18	0.18	< 10	< 10	137	< 10	2590	0.21
N113774	205	226	0.02	78	170	< 2	< 2	17	13	0.02	< 10	< 10	98	< 10	2050	0.09
N113775	205	226	0.04	73	160	< 2	< 2	11	10	0.19	< 10	< 10	106	< 10	766	0.18
N113776	205	226	0.02	77	170	< 2	< 2	12	8	0.15	< 10	< 10	88	< 10	1190	0.27
N113777	205	226	0.01	61	240	2	< 2	18	26	< 0.01	< 10	< 10	104	< 10	1800	-----
N113778	205	226	0.02	50	410	2	< 2	25	16	0.03	< 10	< 10	187	< 10	314	-----
N113779	205	226	0.03	37	320	< 2	< 2	25	31	< 0.01	< 10	< 10	208	< 10	142	-----
N113780	205	226	0.01	44	360	< 2	< 2	22	48	0.34	< 10	< 10	213	< 10	128	-----

CERTIFICATION:

* FOR PROJECT DESCRIPTION.

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 : ICE-IC97-53
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 23-SEP-97
Invoice No. : 19742543
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9742543

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
N113781	205	294	1.0	1.87	8	90	< 0.5	< 2	0.34	0.5	20	172	3930	>15.00	10	< 1	0.03	< 10	0.72	130	12
N113782	205	294	< 0.2	3.27	< 2	110	< 0.5	< 2	1.26	3.5	29	83	1525	6.13	10	< 1	0.02	< 10	1.89	490	< 1
N113783	205	294	< 0.2	3.77	2	140	< 0.5	< 2	0.74	1.5	57	147	3800	10.30	< 10	< 1	0.08	< 10	1.57	530	< 1
N113784	205	294	< 0.2	4.01	< 2	80	< 0.5	< 2	1.02	2.0	35	147	2250	7.34	10	< 1	0.08	< 10	1.93	495	< 1
N113785	205	294	< 0.2	4.03	< 2	150	< 0.5	< 2	1.49	4.0	31	124	2700	7.09	10	< 1	0.11	< 10	2.24	590	< 1
N113786	205	294	< 0.2	4.22	< 2	170	< 0.5	< 2	1.21	4.0	50	145	4780	8.69	10	< 1	0.10	< 10	2.57	700	< 1
N113787	205	294	< 0.2	4.13	< 2	210	< 0.5	< 2	1.26	4.0	48	157	2370	7.35	10	< 1	0.14	< 10	3.07	765	< 1
N113788	205	294	< 0.2	3.08	< 2	480	< 0.5	< 2	1.59	4.0	36	96	1590	5.24	10	< 1	0.07	< 10	2.37	630	< 1
N113789	205	294	< 0.2	3.44	< 2	200	< 0.5	< 2	2.84	8.0	28	93	2860	5.29	10	< 1	< 0.01	< 10	1.91	525	< 1
N113790	205	294	< 0.2	3.89	< 2	90	< 0.5	< 2	2.13	7.0	36	127	3600	6.62	10	< 1	0.08	< 10	2.52	685	< 1
N113791	205	294	0.2	4.15	< 2	70	< 0.5	Intf*	0.55	3.0	45	141	>10000	7.13	10	< 1	0.19	< 10	2.59	565	< 1
N113792	205	294	< 0.2	4.14	< 2	330	< 0.5	Intf*	0.68	3.5	46	131	>10000	7.29	10	< 1	0.14	< 10	3.09	695	< 1
N113793	205	294	< 0.2	3.53	< 2	340	< 0.5	< 2	0.64	18.0	235	109	1100	13.15	10	< 1	0.14	< 10	1.86	2080	< 1
N113794	205	294	< 0.2	3.99	< 2	80	< 0.5	< 2	1.09	1.0	72	172	535	7.74	10	< 1	0.21	< 10	2.81	1045	< 1
N113795	205	294	< 0.2	3.39	< 2	90	< 0.5	< 2	2.43	1.0	51	115	81	6.40	10	< 1	0.12	< 10	2.84	1005	< 1
N113796	205	294	< 0.2	3.81	< 2	120	< 0.5	< 2	3.27	1.0	56	93	64	6.27	10	< 1	0.03	< 10	2.64	1050	< 1
N113797	205	294	< 0.2	3.48	< 2	310	< 0.5	< 2	1.75	1.0	49	119	87	5.79	10	< 1	0.08	< 10	3.31	1020	< 1
N113798	205	294	< 0.2	3.37	< 2	750	< 0.5	< 2	1.20	1.0	45	125	89	5.35	10	< 1	0.07	< 10	3.48	985	< 1
N113799	205	294	< 0.2	3.82	< 2	420	< 0.5	< 2	2.27	1.0	50	138	89	6.29	10	< 1	0.03	< 10	3.35	1060	< 1
N113800	205	294	< 0.2	3.73	< 2	220	< 0.5	< 2	2.88	1.0	51	120	86	6.24	10	< 1	0.03	< 10	2.79	790	< 1
N113801	205	294	0.4	2.84	10	170	< 0.5	< 2	5.94	1.5	73	110	116	6.28	10	< 1	0.10	< 10	2.59	1270	< 1

CERTIFICATION: Ivan Bridden

* FOR ICP VALUES ON SAMPLE N113783

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

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

Project : ICE-IC97-53
Comments:

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Total es : 1
Certificate Date: 23-SEP-97
Invoice No. : I9742543
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9742543

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	Cu %
N113781	205	294	< 0.01	9	150	14	< 2	9	14	0.03	< 10	< 10	165	< 10	144	-----
N113782	205	294	< 0.01	31	190	< 2	< 2	21	46	0.22	< 10	< 10	139	< 10	208	-----
N113783	205	294	0.01	37	270	< 2	< 2	28	40	0.13	< 10	< 10	165	< 10	548	-----
N113784	205	294	< 0.01	44	190	< 2	< 2	22	144	0.18	< 10	< 10	123	< 10	244	-----
N113785	205	294	0.01	37	280	< 2	< 2	23	14	0.21	< 10	< 10	156	< 10	248	-----
N113786	205	294	0.01	48	250	< 2	< 2	24	39	0.18	< 10	< 10	147	< 10	460	-----
N113787	205	294	0.02	56	230	< 2	< 2	22	13	0.20	< 10	< 10	145	< 10	372	-----
N113788	205	294	< 0.01	45	240	< 2	< 2	12	6	0.28	< 10	< 10	123	< 10	224	0.17
N113789	205	294	0.01	40	250	< 2	< 2	12	8	0.26	< 10	< 10	145	< 10	192	0.30
N113790	205	294	< 0.01	51	250	< 2	< 2	16	10	0.30	< 10	< 10	146	< 10	240	0.35
N113791	205	294	0.01	57	Intf*	< 2	< 2	20	26	0.03	< 10	< 10	120	< 10	318	1.74
N113792	205	294	< 0.01	62	Intf*	2	< 2	20	81	0.06	< 10	< 10	129	< 10	256	1.43
N113793	205	294	0.01	71	270	< 2	< 2	23	48	< 0.01	< 10	< 10	148	< 10	2330	-----
N113794	205	294	0.01	64	340	< 2	< 2	26	75	0.06	< 10	< 10	170	< 10	242	-----
N113795	205	294	< 0.01	45	370	4	< 2	19	9	0.29	< 10	< 10	161	< 10	294	-----
N113796	205	294	< 0.01	42	300	2	2	14	17	0.27	< 10	< 10	152	< 10	280	-----
N113797	205	294	< 0.01	52	260	< 2	< 2	14	46	0.34	< 10	< 10	125	< 10	206	-----
N113798	205	294	< 0.01	62	240	< 2	< 2	9	56	0.38	< 10	< 10	97	< 10	192	-----
N113799	205	294	< 0.01	51	290	< 2	< 2	14	32	0.34	< 10	< 10	142	< 10	242	-----
N113800	205	294	< 0.01	48	330	< 2	< 2	17	24	0.28	< 10	< 10	161	< 10	256	-----
N113801	205	294	0.01	64	260	6	2	17	39	0.01	< 10	< 10	102	< 10	448	-----

CERTIFICATION: Ian Pindlay

* FOR ICP VALUES ON SAMPLE N113783

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 : ICE-IC97-50
Comments:

Certificate Date: 23-SEP-97
Invoice No. : 19742542
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9742542

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
N113625	205	226	0.4	4.67	6	330	< 0.5	< 2	0.49	1.0	31	205	2460	14.10	10	< 1	0.05	< 10	1.51	255	< 1
N113626	205	226	< 0.2	7.09	2	370	< 0.5	< 2	0.51	0.5	25	125	1745	8.59	20	< 1	0.05	< 10	1.94	235	< 1
N113627	205	226	< 0.2	6.42	2	220	< 0.5	< 2	0.42	0.5	39	128	2180	8.50	10	< 1	0.03	< 10	1.48	290	< 1
N113628	205	226	< 0.2	5.59	< 2	320	< 0.5	< 2	1.46	4.0	43	273	1580	7.67	10	< 1	0.07	< 10	2.51	550	< 1
N113629	205	226	< 0.2	5.95	< 2	120	< 0.5	< 2	2.65	14.5	41	273	1980	6.72	10	< 1	0.10	< 10	2.90	650	< 1
N113630	205	226	< 0.2	5.62	< 2	130	< 0.5	< 2	2.44	12.0	35	248	4430	5.66	10	< 1	0.06	< 10	3.15	645	< 1
N113631	205	226	< 0.2	5.81	< 2	100	< 0.5	Intf*	3.15	10.0	36	276	>10000	5.68	10	< 1	0.05	< 10	3.22	745	< 1
N113632	205	226	< 0.2	4.76	6	290	< 0.5	< 2	3.60	2.5	68	226	3310	6.37	10	< 1	0.01	< 10	3.13	775	< 1
N113633	205	226	< 0.2	3.66	< 2	60	< 0.5	< 2	2.54	3.5	68	29	351	7.12	10	< 1	0.01	< 10	2.09	1015	< 1
N113634	205	226	< 0.2	3.66	< 2	100	< 0.5	< 2	2.54	5.0	76	24	162	7.74	10	< 1	0.07	< 10	1.95	1160	< 1
N113635	205	226	< 0.2	3.32	< 2	390	< 0.5	< 2	2.40	4.5	124	30	62	9.31	10	< 1	0.06	< 10	2.05	1565	< 1
N113636	205	226	< 0.2	3.13	< 2	270	< 0.5	< 2	2.38	3.0	113	25	122	9.47	10	1	0.09	< 10	2.05	1485	< 1
N113637	205	226	< 0.2	2.71	< 2	170	< 0.5	< 2	2.04	1.5	106	26	50	8.91	10	< 1	0.05	< 10	1.56	1215	< 1
N113638	205	226	< 0.2	2.80	< 2	270	< 0.5	< 2	2.07	2.0	115	24	55	9.33	10	< 1	0.04	< 10	1.65	1400	< 1
N113639	205	226	< 0.2	2.77	< 2	250	< 0.5	< 2	1.94	1.5	38	15	77	6.60	10	< 1	0.01	< 10	1.80	855	< 1
N113640	205	226	< 0.2	3.97	< 2	110	< 0.5	< 2	2.93	1.5	66	160	135	5.28	10	< 1	0.02	< 10	2.60	820	< 1
N113641	205	226	< 0.2	3.60	< 2	70	< 0.5	< 2	2.70	2.0	53	92	470	5.17	10	< 1	0.03	< 10	1.97	765	< 1

CERTIFICATION:

*INTERFERENCES: Cu ON Bi AND P.

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

Project : ICE-IC97-50
Comments:

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Invoice No. : I9742542
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9742542

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	Cu %
N113625	205	226	< 0.01	23	310	8	< 2	14	19	0.11	< 10	< 10	286	< 10	334	-----
N113626	205	226	< 0.01	32	280	4	< 2	29	17	0.14	< 10	< 10	276	< 10	220	-----
N113627	205	226	< 0.01	34	270	< 2	< 2	39	15	0.12	< 10	< 10	193	< 10	554	-----
N113628	205	226	< 0.01	77	190	2	< 2	41	12	0.15	< 10	< 10	157	< 10	510	-----
N113629	205	226	0.01	82	200	< 2	< 2	31	15	0.16	< 10	< 10	159	< 10	428	-----
N113630	205	226	0.01	81	230	< 2	< 2	26	44	0.15	< 10	< 10	153	< 10	258	0.45
N113631	205	226	0.02	91	Intf*	< 2	< 2	23	21	0.19	< 10	< 10	147	< 10	320	0.99
N113632	205	226	0.01	76	240	2	< 2	19	13	0.23	< 10	< 10	167	< 10	1125	0.34
N113633	205	226	< 0.01	35	540	< 2	< 2	11	24	0.60	< 10	< 10	210	< 10	864	-----
N113634	205	226	< 0.01	30	610	< 2	< 2	13	34	0.68	< 10	< 10	236	< 10	1165	-----
N113635	205	226	< 0.01	34	610	< 2	< 2	17	71	0.66	< 10	< 10	237	< 10	1370	-----
N113636	205	226	< 0.01	32	620	2	< 2	16	46	0.64	< 10	< 10	233	< 10	1320	-----
N113637	205	226	< 0.01	30	620	< 2	< 2	12	27	0.59	< 10	< 10	210	< 10	1155	-----
N113638	205	226	< 0.01	31	570	< 2	< 2	15	22	0.55	< 10	< 10	215	< 10	1300	-----
N113639	205	226	< 0.01	22	650	< 2	< 2	8	14	0.50	< 10	< 10	195	< 10	178	-----
N113640	205	226	0.01	72	260	2	4	13	10	0.26	< 10	< 10	126	< 10	816	0.01
N113641	205	226	< 0.01	62	310	< 2	< 2	8	11	0.32	< 10	< 10	122	< 10	674	0.05

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

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

Project : ICE-IC97-54
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Invoice No. : 19742531
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742531

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
N113802	205	226	< 0.2	3.52	< 2	200	< 0.5	< 2	1.59	3.0	54	78	803	7.40	10	< 1	< 0.01	< 10	3.07	1270	< 1
N113803	205	226	< 0.2	3.26	2	200	< 0.5	< 2	1.44	2.0	31	66	110	6.09	10	< 1	< 0.01	< 10	3.00	1240	< 1
N113804	205	226	< 0.2	3.36	< 2	110	< 0.5	< 2	1.43	1.5	26	54	127	5.96	10	< 1	< 0.01	< 10	2.95	1360	< 1
N113805	205	226	< 0.2	3.71	< 2	230	< 0.5	< 2	1.80	1.5	28	52	76	6.18	10	< 1	< 0.01	< 10	2.91	1445	< 1
N113806	205	226	< 0.2	4.64	< 2	270	< 0.5	< 2	1.46	2.0	66	101	93	8.08	20	< 1	0.01	< 10	3.68	2140	< 1
N113807	205	226	< 0.2	4.70	< 2	300	< 0.5	< 2	1.68	2.0	87	84	133	9.35	10	< 1	0.13	< 10	2.83	2660	< 1
N113808	205	226	< 0.2	1.57	10	510	0.5	< 2	0.34	1.0	39	38	247	2.94	< 10	< 1	0.45	< 10	0.37	1580	1
N113809	205	226	< 0.2	1.12	2	390	< 0.5	< 2	0.20	0.5	40	39	356	2.13	< 10	< 1	0.27	< 10	0.25	1375	1
N113810	205	226	< 0.2	3.13	< 2	270	< 0.5	< 2	3.40	3.5	109	88	1285	7.77	10	< 1	0.15	< 10	1.41	2930	1
N113811	205	226	< 0.2	0.85	6	380	< 0.5	< 2	2.06	1.0	19	44	85	1.98	< 10	1	0.37	10	0.17	1680	< 1
N113812	205	226	< 0.2	0.84	10	310	< 0.5	< 2	0.51	< 0.5	15	50	93	2.37	< 10	< 1	0.30	10	0.14	1135	1

CERTIFICATION: Ian A Bradley

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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

Project : ICE-IC97-54
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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
N113802	205	226	< 0.01	46	350	< 2	< 2	23	19	0.49	< 10	< 10	203	< 10	1270
N113803	205	226	< 0.01	38	450	< 2	< 2	15	9	0.54	< 10	< 10	207	< 10	386
N113804	205	226	< 0.01	35	390	< 2	< 2	10	11	0.51	< 10	< 10	187	< 10	192
N113805	205	226	< 0.01	36	390	< 2	< 2	10	12	0.49	< 10	< 10	195	< 10	130
N113806	205	226	< 0.01	53	450	4	< 2	22	13	0.34	< 10	< 10	245	< 10	444
N113807	205	226	0.01	55	460	6	< 2	18	30	0.01	< 10	< 10	183	< 10	1040
N113808	205	226	< 0.01	34	740	8	< 2	6	11	< 0.01	< 10	< 10	50	< 10	496
N113809	205	226	< 0.01	25	300	8	< 2	4	8	< 0.01	< 10	< 10	34	< 10	274
N113810	205	226	< 0.01	60	390	2	< 2	16	40	< 0.01	< 10	< 10	144	< 10	1030
N113811	205	226	< 0.01	28	430	10	< 2	3	14	< 0.01	< 10	< 10	26	< 10	152
N113812	205	226	< 0.01	29	380	8	< 2	3	8	< 0.01	< 10	< 10	27	< 10	134

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Y1A 3S9

Project : ICE-ID97-25
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CERTIFICATE OF ANALYSIS A9742286

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
N113720	205	226	< 0.2	0.62	2	70	< 0.5	< 2	5.07	< 0.5	4	100	114	3.03	< 10	1	0.05	< 10	0.15	660	1
N113721	205	226	< 0.2	0.77	< 2	60	< 0.5	< 2	3.67	< 0.5	3	135	58	4.16	< 10	< 1	0.09	< 10	0.17	640	1

CERTIFICATION: Jean A Brabler

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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
N113720	205	226	< 0.01	11	1550	6	< 2	1	27	0.01	< 10	< 10	61	< 10	18
N113721	205	226	< 0.01	9	1780	6	< 2	3	26	0.01	< 10	< 10	85	< 10	46

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Y1A 3S9

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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
N113609	205	294	0.4	2.10	20	40	< 0.5	< 2	0.31	< 0.5	58	212	1815	14.20	10	< 1	0.02	< 10	0.71	105	9
N113610	205	294	0.2	0.92	8	< 10	< 0.5	2	0.05	< 0.5	387	93	1720	>15.00	< 10	< 1	0.11	< 10	0.44	45	8
N113611	205	294	0.4	0.85	12	< 10	< 0.5	< 2	0.05	< 0.5	364	123	4660	>15.00	< 10	< 1	0.14	< 10	0.37	35	8
N113612	205	294	0.8	1.99	12	< 10	< 0.5	Intf*	0.11	< 0.5	211	105	>10000	>15.00	10	< 1	0.17	< 10	0.72	90	3
N113613	205	294	1.0	3.23	8	< 10	< 0.5	Intf*	0.08	< 0.5	213	150	>10000	>15.00	10	< 1	0.21	< 10	1.07	130	3
N113614	205	294	0.6	5.84	20	10	< 0.5	Intf*	0.09	< 0.5	93	196	>10000	>15.00	20	< 1	0.12	< 10	2.42	300	4
N113615	205	294	0.4	6.38	26	20	< 0.5	Intf*	0.09	< 0.5	56	200	>10000	>15.00	10	< 1	0.08	< 10	2.90	395	3
N113616	205	294	0.2	5.37	< 2	30	< 0.5	Intf*	0.23	< 0.5	110	184	>10000	13.25	10	< 1	0.04	< 10	1.87	425	1
N113617	205	294	< 0.2	3.88	< 2	90	< 0.5	< 2	0.31	8.0	161	159	7980	13.35	10	< 1	0.04	< 10	2.54	815	1
N113618	205	294	< 0.2	4.33	< 2	350	< 0.5	< 2	1.59	7.5	81	224	2040	9.18	10	< 1	0.01	< 10	3.44	880	< 1
N113619	205	294	< 0.2	4.34	< 2	300	< 0.5	< 2	1.79	3.0	99	232	995	8.89	10	< 1	0.03	< 10	3.64	1010	< 1
N113620	205	294	< 0.2	4.23	6	320	< 0.5	< 2	1.78	4.5	99	188	3240	8.90	10	< 1	0.01	< 10	3.47	995	< 1
N113621	205	294	< 0.2	4.37	< 2	110	< 0.5	< 2	1.17	6.5	70	181	4860	8.64	10	< 1	< 0.01	< 10	3.84	875	1
N113622	205	294	< 0.2	4.33	2	40	< 0.5	< 2	0.35	7.0	98	104	6460	11.40	10	< 1	0.01	< 10	3.73	1010	< 1
N113623	205	294	0.6	4.70	12	10	< 0.5	< 2	0.19	4.0	68	88	3380	13.10	10	< 1	< 0.01	< 10	3.92	820	1
N113624	205	294	1.2	3.79	< 2	10	< 0.5	< 2	0.23	12.0	125	85	4160	>15.00	10	< 1	< 0.01	< 10	2.84	730	1

CERTIFICATION: Ian Bradley

*INTERFERENCES: Cu ON Bi AND P.

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

Project : ICE-IC97-49
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Invoice No. : 19742239
P.O. Number :
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CERTIFICATE OF ANALYSIS A9742239

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	Cu %	Spec Gr S.G.
N113609	205	294	0.01	7	250	16	< 2	11	9	< 0.01	< 10	10	368	< 10	162	0.18	2.68
N113610	205	294	< 0.01	27	70	12	< 2	3	4	< 0.01	< 10	10	52	< 10	84	0.17	3.39
N113611	205	294	< 0.01	25	90	24	< 2	3	5	< 0.01	< 10	10	38	< 10	222	0.46	3.43
N113612	205	294	< 0.01	48	Intf*	8	< 2	6	5	< 0.01	< 10	10	78	< 10	162	2.19	3.23
N113613	205	294	< 0.01	53	Intf*	2	< 2	8	4	< 0.01	< 10	10	86	< 10	130	2.77	3.23
N113614	205	294	< 0.01	60	Intf*	< 2	< 2	15	4	< 0.01	< 10	10	131	< 10	204	2.56	3.01
N113615	205	294	< 0.01	61	Intf*	< 2	< 2	22	5	< 0.01	< 10	10	151	< 10	292	1.28	2.90
N113616	205	294	< 0.01	54	Intf*	< 2	< 2	27	3	< 0.01	< 10	< 10	135	< 10	4650	-----	-----
N113617	205	294	< 0.01	62	280	2	< 2	18	4	< 0.01	< 10	10	105	< 10	4780	-----	-----
N113618	205	294	0.01	66	250	< 2	< 2	19	13	0.19	< 10	< 10	120	< 10	2830	-----	-----
N113619	205	294	0.02	67	220	< 2	< 2	22	10	0.20	< 10	< 10	119	< 10	2470	-----	-----
N113620	205	294	0.01	61	260	< 2	< 2	17	12	0.17	< 10	< 10	105	< 10	1885	-----	-----
N113621	205	294	0.01	59	280	< 2	< 2	19	9	0.17	< 10	< 10	116	< 10	1430	-----	-----
N113622	205	294	< 0.01	43	350	< 2	< 2	24	12	< 0.01	< 10	< 10	191	< 10	2650	-----	-----
N113623	205	294	< 0.01	38	420	4	< 2	22	6	0.01	< 10	< 10	178	< 10	1210	-----	-----
N113624	205	294	< 0.01	39	350	6	< 2	20	6	< 0.01	< 10	10	162	< 10	2500	-----	-----

CERTIFICATION: Ian Pontier

*INTERFERENCES: Cu ON Bi AND P.

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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

Project : ICE-IC97-51
Comments:

Certificate Date: 23-SEP-97
Invoice No. : I9742217
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9742217

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
N113642	205	226	< 0.2	4.69	< 2	190	< 0.5	< 2	2.82	6.5	37	226	3290	5.03	10	< 1	0.06	< 10	2.58	680	< 1
N113643	205	226	< 0.2	4.37	< 2	190	< 0.5	< 2	3.08	3.0	47	192	3380	4.74	10	< 1	0.03	< 10	2.55	780	< 1
N113644	205	226	< 0.2	3.09	< 2	130	< 0.5	< 2	1.88	3.5	49	130	2520	4.39	10	< 1	0.01	< 10	2.21	640	< 1
N113645	205	226	< 0.2	3.65	< 2	420	< 0.5	< 2	2.06	6.0	121	161	5020	5.67	10	< 1	0.08	< 10	2.37	1375	< 1
N113646	205	226	< 0.2	4.21	2	140	< 0.5	< 2	3.38	3.5	43	107	3200	4.03	10	< 1	0.06	< 10	2.10	765	< 1
N113647	205	226	< 0.2	4.73	< 2	150	< 0.5	< 2	3.60	7.5	46	157	5010	4.82	10	< 1	0.07	< 10	2.33	760	< 1
N113648	205	226	< 0.2	5.22	< 2	310	< 0.5	< 2	4.89	9.0	43	173	4360	5.33	10	< 1	0.04	< 10	1.70	685	< 1
N113649	205	226	< 0.2	4.06	< 2	760	< 0.5	< 2	2.17	6.0	75	217	3770	9.22	10	< 1	0.04	< 10	2.52	765	< 1
N113650	205	226	< 0.2	3.33	4	490	< 0.5	< 2	1.90	2.5	70	49	2820	9.09	10	< 1	0.10	< 10	2.03	775	< 1
N113651	205	226	< 0.2	3.31	< 2	240	< 0.5	< 2	1.50	2.5	94	50	2760	9.77	10	< 1	0.03	< 10	2.17	1020	< 1
N113652	205	226	< 0.2	3.03	< 2	190	< 0.5	< 2	1.90	4.5	59	41	2110	6.94	10	< 1	0.05	< 10	1.84	700	< 1
N113653	205	226	< 0.2	3.38	2	210	< 0.5	< 2	1.50	2.5	102	83	3690	8.59	10	< 1	0.03	< 10	2.77	1050	< 1
N113654	205	226	< 0.2	3.19	< 2	90	< 0.5	< 2	1.08	0.5	71	97	2630	7.12	10	< 1	0.01	< 10	2.67	1055	< 1
N113655	205	226	< 0.2	3.03	< 2	170	< 0.5	< 2	1.71	< 0.5	45	74	827	6.08	10	< 1	0.01	< 10	2.41	1005	< 1
N113656	205	226	< 0.2	2.72	< 2	230	< 0.5	< 2	1.95	< 0.5	37	37	311	6.06	10	< 1	< 0.01	< 10	1.90	775	< 1
N113657	205	226	< 0.2	2.97	< 2	360	< 0.5	< 2	1.84	< 0.5	40	69	182	5.35	10	< 1	0.01	< 10	2.22	930	< 1
N113658	205	226	< 0.2	3.29	< 2	150	< 0.5	< 2	2.04	< 0.5	39	71	74	5.88	10	< 1	0.07	< 10	2.42	1130	< 1
N113659	205	226	< 0.2	2.96	< 2	290	< 0.5	< 2	2.09	< 0.5	39	65	99	5.80	10	< 1	0.03	< 10	2.14	1090	< 1
N113660	205	226	< 0.2	3.32	< 2	590	< 0.5	< 2	1.84	< 0.5	163	88	602	9.91	10	< 1	0.04	< 10	2.35	2600	< 1
N113661	205	226	< 0.2	3.39	< 2	180	< 0.5	< 2	1.89	< 0.5	37	62	161	6.17	10	< 1	0.04	< 10	2.53	1080	< 1

CERTIFICATION: Ian Pochler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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

EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-IC97-51
Comments:

Certificate Date: 23-SEP-97
Invoice No. : 19742217
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742217

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	Cu %	Spec Gr S.G.
N113642	205	226	0.03	85	210	4	< 2	17	8	0.16	< 10	< 10	133	< 10	240	0.35	2.70
N113643	205	226	0.03	85	220	< 2	< 2	12	9	0.22	< 10	< 10	111	< 10	360	0.35	2.70
N113644	205	226	0.02	76	240	< 2	< 2	8	6	0.15	< 10	< 10	83	< 10	332	0.28	2.86
N113645	205	226	0.01	87	220	< 2	< 2	13	11	0.13	< 10	< 10	98	< 10	836	0.56	2.65
N113646	205	226	0.02	75	250	< 2	< 2	7	10	0.19	< 10	< 10	88	< 10	218	0.35	2.86
N113647	205	226	0.03	83	220	2	< 2	12	20	0.17	< 10	< 10	105	< 10	216	0.53	2.81
N113648	205	226	0.03	73	170	< 2	< 2	13	16	0.11	< 10	< 10	124	< 10	406	0.45	2.83
N113649	205	226	0.01	73	280	< 2	< 2	23	67	0.32	< 10	< 10	178	< 10	1255	0.39	2.66
N113650	205	226	< 0.01	33	530	< 2	< 2	22	122	0.57	< 10	< 10	214	< 10	1215	0.29	2.84
N113651	205	226	< 0.01	36	500	< 2	< 2	20	90	0.51	< 10	< 10	187	< 10	1355	0.30	2.82
N113652	205	226	< 0.01	31	360	< 2	< 2	15	10	0.36	< 10	< 10	160	< 10	632	0.23	2.77
N113653	205	226	< 0.01	47	340	< 2	< 2	24	10	0.34	< 10	< 10	202	< 10	866	0.40	2.67
N113654	205	226	0.01	49	330	2	< 2	17	5	0.20	< 10	< 10	163	< 10	524	0.31	2.77
N113655	205	226	0.02	39	360	< 2	< 2	11	12	0.37	< 10	< 10	154	< 10	270	0.09	2.73
N113656	205	226	0.03	28	610	< 2	< 2	7	11	0.31	< 10	< 10	116	< 10	194	-----	-----
N113657	205	226	0.01	40	350	< 2	< 2	8	9	0.28	< 10	< 10	129	< 10	166	-----	-----
N113658	205	226	0.01	38	330	< 2	< 2	8	11	0.33	< 10	< 10	139	< 10	136	-----	-----
N113659	205	226	0.03	34	390	< 2	< 2	11	13	0.33	< 10	< 10	159	< 10	134	-----	-----
N113660	205	226	< 0.01	49	310	< 2	< 2	22	18	0.29	< 10	< 10	186	< 10	752	-----	-----
N113661	205	226	< 0.01	38	350	< 2	< 2	7	31	0.33	< 10	< 10	134	< 10	152	-----	-----

CERTIFICATION:

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

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

Project : ICE-IC96-23
Comments:

Certificate Date: 16-SEP-97
Invoice No. : 19742215
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742215

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
N113719	205	226	< 0.2	1.62	2	740	< 0.5	< 2	2.20	< 0.5	16	62	63	4.32	< 10	< 1	0.03	< 10	1.05	1075	1

CERTIFICATION: Ivan Pochler

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 : ICE-IC96-23
Comments:

P. ber : 1-B
To. ges : 1
Certificate Date: 16-SEP-97
Invoice No. : 19742215
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9742215

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
N113719	205	226	0.01	33	530	2	< 2	6	38	0.21	< 10	< 10	102	< 10	62

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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

Project : IC 97-47
Comments:

Certificate Date: 16-SEP-97
Invoice No. :I9741702
P.O. Number :
Account :MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9741702

SAMPLE	PREP CODE		Cu %	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
N113531	208	226	1.18	< 0.2	7.87	< 2	910	< 0.5	Intf*	0.19	< 0.5	25	152	>10000	6.42	< 10	< 1	< 0.01	< 10	2.50	620
N113532	208	226	2.51	< 0.2	6.41	< 2	190	< 0.5	Intf*	1.19	10.5	27	100	>10000	7.20	10	< 1	< 0.01	< 10	2.59	725
N113533	208	226	2.89	< 0.2	4.00	< 2	70	< 0.5	Intf*	1.17	11.0	27	131	>10000	7.11	< 10	1	< 0.01	< 10	2.14	545
N113534	208	226	1.95	< 0.2	4.34	< 2	100	< 0.5	Intf*	2.13	23.0	33	133	>10000	6.60	10	1	< 0.01	< 10	3.01	735
N113535	208	226	1.93	< 0.2	4.60	2	140	< 0.5	Intf*	2.82	26.0	33	171	>10000	5.87	< 10	< 1	0.04	< 10	2.56	705
N113536	208	226	2.77	< 0.2	5.26	< 2	90	< 0.5	Intf*	2.82	29.0	42	179	>10000	7.04	10	2	0.03	< 10	3.32	845
N113537	208	226	1.74	< 0.2	4.60	< 2	200	< 0.5	Intf*	2.69	23.5	33	180	>10000	5.39	10	< 1	0.07	< 10	2.74	740
N113538	208	226	1.43	< 0.2	4.59	< 2	590	< 0.5	Intf*	3.07	25.0	58	185	>10000	6.44	< 10	< 1	0.05	< 10	2.78	800
N113539	208	226	0.46	< 0.2	4.33	< 2	120	< 0.5	< 2	2.77	13.5	72	163	4450	6.85	< 10	< 1	0.04	< 10	2.77	870
N113540	208	226	0.51	< 0.2	4.37	< 2	640	< 0.5	< 2	3.04	12.0	75	167	4860	6.60	< 10	< 1	0.06	< 10	2.73	815
N113541	208	226	0.55	< 0.2	4.47	< 2	1660	< 0.5	< 2	2.98	9.5	78	164	5250	6.73	< 10	1	0.07	< 10	2.94	845
N113542	208	226	0.27	< 0.2	4.03	< 2	790	< 0.5	< 2	2.86	4.0	63	147	2440	5.31	< 10	1	0.12	< 10	2.72	825
N113543	208	226	0.19	< 0.2	4.41	< 2	1250	< 0.5	< 2	3.37	2.5	58	165	1810	5.33	< 10	< 1	0.06	< 10	2.70	875

CERTIFICATION: B. Caplin

*INTERFERENCE: Cu ON Bi AND P.

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

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Y1A 3S9

Project : IC 97-47
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 16-SEP-97
Invoice No. : 19741702
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9741702

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Spec Gr S.G.
N113531	208	226	1	< 0.01	36	Intf*	2	2	57	17	0.13	< 10	< 10	208	< 10	138	2.50
N113532	208	226	1	< 0.01	33	Intf*	4	< 2	44	10	0.15	< 10	< 10	240	< 10	122	2.62
N113533	208	226	1	< 0.01	39	Intf*	6	< 2	32	66	0.17	< 10	< 10	166	< 10	176	2.76
N113534	208	226	1	< 0.01	55	Intf*	2	2	23	20	0.33	< 10	< 10	163	< 10	244	2.78
N113535	208	226	1	0.03	61	Intf*	6	2	18	10	0.22	< 10	< 10	133	< 10	484	2.83
N113536	208	226	1	0.02	67	Intf*	6	2	26	12	0.22	< 10	< 10	160	< 10	488	2.77
N113537	208	226	1	0.01	75	Intf*	< 2	< 2	18	9	0.22	< 10	< 10	122	< 10	276	2.76
N113538	208	226	1	0.06	74	Intf*	< 2	< 2	19	23	0.26	< 10	< 10	137	< 10	1110	2.81
N113539	208	226	< 1	0.09	73	200	< 2	< 2	12	8	0.28	< 10	< 10	117	< 10	1715	2.85
N113540	208	226	1	0.09	75	200	< 2	2	14	20	0.28	< 10	< 10	119	< 10	1865	2.84
N113541	208	226	1	0.11	70	210	< 2	2	16	54	0.31	< 10	< 10	131	< 10	2130	2.85
N113542	208	226	1	0.08	73	220	< 2	2	12	18	0.25	< 10	< 10	105	< 10	1350	2.84
N113543	208	226	1	0.07	72	220	< 2	2	12	19	0.25	< 10	< 10	114	< 10	1115	2.83

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

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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 : ICE-ID97-31
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 15-SEP-97
Invoice No. : I9741700
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741700

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
N113751	205	226	< 0.2	2.87	< 2	150	< 0.5	< 2	1.77	0.5	64	30	189	8.49	10	< 1	0.07	< 10	2.30	1125	1
N113752	205	226	< 0.2	3.67	< 2	240	< 0.5	< 2	2.00	36.5	166	192	8960	8.42	< 10	< 1	0.05	< 10	2.59	1045	< 1
N113753	205	226	< 0.2	3.88	< 2	500	< 0.5	< 2	2.55	28.5	118	174	3830	6.99	< 10	< 1	0.09	< 10	2.63	965	< 1
N113754	205	226	< 0.2	3.93	< 2	320	< 0.5	< 2	2.56	8.5	147	184	1490	8.26	< 10	< 1	0.10	< 10	2.72	1145	< 1

CERTIFICATION: Ian Pitcher

Chemex Labs Ltd.

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

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

Project : ICE-ID97-31
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Page ...er : 1-B
Total ...ges : 1
Certificate Date: 15-SEP-97
Invoice No. : I9741700
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741700

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
N113751	205	226	0.03	33	610	< 2	2	18	13	0.51	< 10	< 10	219	< 10	666
N113752	205	226	0.32	63	240	< 2	2	19	17	0.20	< 10	< 10	134	< 10	5720
N113753	205	226	0.22	65	200	< 2	2	17	20	0.23	< 10	< 10	127	< 10	3960
N113754	205	226	0.18	64	230	< 2	2	18	19	0.19	< 10	< 10	138	< 10	3090

CERTIFICATION: [illegible]

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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 : ICE-IC97-48
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 15-SEP-97
Invoice No. : I9741699
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741699

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
N113553	205	294	0.2	7.09	6	130	< 0.5	< 2	0.42	< 0.5	13	322	1030	5.34	10	< 1	0.04	< 10	1.18	225	< 1
N113554	205	294	< 0.2	5.95	< 2	70	< 0.5	< 2	1.00	0.5	19	247	882	4.81	< 10	< 1	0.05	< 10	1.64	315	< 1
N113555	205	294	< 0.2	5.53	< 2	90	< 0.5	< 2	1.79	4.5	27	248	1210	5.86	10	< 1	0.04	< 10	2.28	460	< 1
N113556	205	294	< 0.2	5.75	< 2	80	< 0.5	< 2	2.72	14.0	27	207	4240	5.48	< 10	< 1	0.06	< 10	2.28	645	1

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

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Y1A 3S9

Project : ICE-IC97-48
Comments:

Page er : 1-B
Total ges : 1
Certificate Date: 15-SEP-97
Invoice No. : I9741699
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741699

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
N113553	205	294	< 0.01	48	180	< 2	2	16	8	0.11	< 10	< 10	192	< 10	86
N113554	205	294	0.01	59	120	< 2	2	25	10	0.10	< 10	< 10	133	< 10	96
N113555	205	294	0.01	66	160	< 2	2	55	9	0.12	< 10	< 10	154	< 10	122
N113556	205	294	0.01	74	120	< 2	< 2	40	8	0.15	< 10	< 10	143	< 10	116

CERTIFICATION: Frank Bachler

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-47
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 15-SEP-97
Invoice No. : 19741695
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741695

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
N113528	205	226	< 0.2	2.84	2	220	< 0.5	6	0.85	< 0.5	26	99	1590	11.15	10	< 1	0.08	< 10	1.56	340	3
N113529	205	226	< 0.2	3.37	6	140	< 0.5	6	0.46	< 0.5	46	188	3590	13.75	10	1	0.02	< 10	1.92	185	2
N113530	205	226	< 0.2	6.98	< 2	230	< 0.5	< 2	0.63	< 0.5	31	114	1340	6.84	10	1	0.02	< 10	2.21	535	1
N113544	205	226	< 0.2	4.78	2	260	< 0.5	< 2	3.71	1.0	61	141	316	5.69	10	1	0.10	< 10	3.10	975	1
N113545	205	226	< 0.2	4.47	< 2	120	< 0.5	< 2	3.00	0.5	78	153	88	7.34	< 10	< 1	0.04	< 10	3.46	1190	1
N113546	205	226	< 0.2	3.27	< 2	180	< 0.5	< 2	2.30	< 0.5	55	55	87	5.81	10	< 1	0.12	< 10	2.49	885	1

CERTIFICATION: Stewart Buchler

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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 : ICE-IC97-47
Comments:

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Certificate Date: 15-SEP-97
Invoice No. : 19741695
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741695

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
N113528	205	226	< 0.01	21	250	4	< 2	11	16	0.17	< 10	< 10	149	< 10	186
N113529	205	226	< 0.01	22	200	8	2	14	13	0.04	< 10	10	210	< 10	190
N113530	205	226	< 0.01	30	280	< 2	2	39	33	0.17	< 10	< 10	169	< 10	136
N113544	205	226	0.07	77	260	< 2	2	12	15	0.27	< 10	< 10	133	< 10	974
N113545	205	226	0.10	75	280	< 2	2	15	15	0.34	< 10	< 10	158	< 10	1440
N113546	205	226	0.05	44	390	< 2	2	10	42	0.42	< 10	< 10	155	< 10	718

CERTIFICATION: Ian Pollock

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

Project : ICE-IC97-48
Comments:

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Total Pages :1
Certificate Date: 16-SEP-97
Invoice No. :I9741694
P.O. Number :
Account :MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9741694

SAMPLE	PREP CODE		Cu %	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
N113557	205	226	1.01	< 0.2	5.24	< 2	100	< 0.5	< 2	3.43	17.0	29	189	9950	5.76	< 10	1	0.08	< 10	2.48	725
N113558	205	226	0.83	< 0.2	5.69	< 2	880	< 0.5	< 2	2.84	14.0	30	233	7920	6.39	10	< 1	0.05	< 10	2.48	630
N113559	205	226	1.25	< 0.2	5.12	< 2	570	< 0.5	Intf*	3.09	16.0	37	158	>10000	6.32	10	< 1	0.06	< 10	2.54	705
N113560	205	226	0.83	< 0.2	4.49	< 2	530	< 0.5	< 2	2.94	8.5	54	109	7730	7.96	10	< 1	0.03	< 10	2.72	805
N113561	205	226	0.37	< 0.2	3.11	< 2	200	< 0.5	< 2	1.99	3.5	59	56	3550	6.71	10	< 1	0.07	< 10	1.97	790
N113562	205	226	0.03	< 0.2	3.07	< 2	80	< 0.5	< 2	2.07	4.0	50	26	237	5.87	10	< 1	0.07	< 10	1.93	830
N113563	205	226	0.08	< 0.2	3.02	< 2	110	< 0.5	< 2	1.83	6.5	64	32	729	6.71	< 10	< 1	0.01	< 10	2.10	930
N113564	205	226	0.03	< 0.2	3.05	< 2	60	< 0.5	< 2	2.11	2.0	50	22	272	5.84	< 10	< 1	0.05	< 10	1.71	795
N113565	205	226	0.11	< 0.2	2.99	< 2	50	< 0.5	< 2	2.08	2.0	56	22	979	6.11	10	< 1	0.06	< 10	1.70	845
N113566	205	226	0.04	< 0.2	3.55	< 2	30	< 0.5	< 2	2.48	6.0	50	31	372	6.30	< 10	< 1	0.02	< 10	2.17	915
N113567	205	226	0.01	0.2	3.70	< 2	100	< 0.5	< 2	2.90	4.5	60	29	131	7.02	10	< 1	0.03	< 10	2.21	995
N113568	205	226	0.07	< 0.2	2.92	< 2	50	< 0.5	< 2	1.97	4.5	99	30	675	8.48	< 10	1	0.03	< 10	2.06	1095
N113569	205	226	0.16	< 0.2	2.79	< 2	420	< 0.5	< 2	1.98	2.5	123	34	1460	9.80	< 10	< 1	0.04	< 10	1.68	1090
N113570	205	226	0.07	< 0.2	3.27	< 2	560	< 0.5	< 2	2.51	2.5	101	34	663	8.51	< 10	< 1	0.03	< 10	1.75	990
N113571	205	226	0.05	< 0.2	3.70	< 2	280	< 0.5	< 2	2.02	< 0.5	67	43	423	8.49	10	< 1	< 0.01	< 10	2.45	1120

CERTIFICATION: Ivan Bichler

*INTERFERENCE: Cu ON Bi AND P.

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 : ICE-IC97-48
Comments:

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Certificate Date: 16-SEP-97
Invoice No. : 19741694
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9741694

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Spec Gr S.G.
N113557	205	226	1	0.01	71	170	4	2	22	9	0.21	< 10	< 10	145	< 10	132	2.82
N113558	205	226	1	0.01	77	220	< 2	2	27	21	0.16	< 10	< 10	153	< 10	150	2.75
N113559	205	226	1	0.03	68	Intf*	2	< 2	21	15	0.27	< 10	< 10	154	< 10	278	2.80
N113560	205	226	1	0.05	49	320	4	4	21	19	0.40	< 10	< 10	187	< 10	848	2.77
N113561	205	226	1	0.07	44	470	< 2	< 2	11	22	0.43	< 10	< 10	151	< 10	1255	2.93
N113562	205	226	1	0.04	35	450	< 2	2	8	15	0.51	< 10	< 10	162	< 10	652	2.96
N113563	205	226	< 1	0.05	37	430	< 2	2	9	11	0.45	< 10	< 10	151	< 10	912	2.94
N113564	205	226	1	0.04	34	460	< 2	2	7	11	0.45	< 10	< 10	157	< 10	728	2.97
N113565	205	226	< 1	0.05	34	440	< 2	2	8	13	0.44	< 10	< 10	147	< 10	932	2.98
N113566	205	226	1	0.04	35	460	< 2	< 2	9	8	0.49	< 10	< 10	173	< 10	556	3.03
N113567	205	226	< 1	0.03	34	450	< 2	2	12	9	0.49	< 10	< 10	185	< 10	506	2.93
N113568	205	226	1	0.07	38	430	< 2	2	13	15	0.43	< 10	< 10	164	< 10	1505	2.94
N113569	205	226	1	0.15	36	430	< 2	2	13	23	0.43	< 10	< 10	160	< 10	3050	2.98
N113570	205	226	< 1	0.08	36	460	< 2	2	15	13	0.43	< 10	< 10	187	< 10	1790	2.88
N113571	205	226	1	0.04	38	660	< 2	4	13	13	0.48	< 10	< 10	219	< 10	754	2.90

CERTIFICATION: Heather Allen

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-ID97-34
Comments:

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Invoice No. : I9741427
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Account : MPO

CERTIFICATE OF ANALYSIS A9741427

SAMPLE	PREP CODE	Cu %
N113457	244 --	2.13

CERTIFICATION: Saad Cetinay

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

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Y1A 3S9

Project : ICE-ID97-31
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Invoice No. : I9741019
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CERTIFICATE OF ANALYSIS A9741019

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N113452	244 --	< 5	0.26
N113454	244 --	< 5	-----
N113446	244 --	15	0.34

CERTIFICATION: Said Leing

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British Columbia, Canada V7J 2C1
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P.O. BOX 4127
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Y1A 3S9

Project : ICE ID97-20
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Invoice No. : 19741010
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9741010

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N113179	244 --	20	0.54
N113180	244 --	55	-----
N113181	244 --	35	0.95

CERTIFICATION: Said Ghani

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

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Y1A 3S9

Project : ICE-IC97-46
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Invoice No. : I9740738
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9740738

SAMPLE	PREP CODE		Au ppb FA+AA	Spec Gr S.G.	Cu %	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
N113491	205	226	435	4.17	4.25	3.8	0.13	12	< 10	< 0.5	Intf*	0.11	2.5	285	31	>10000	>15.00	< 10	1	0.02	< 10
N113492	205	226	305	4.10	2.45	4.0	< 0.01	2	< 10	< 0.5	Intf*	0.01	1.0	522	49	>10000	>15.00	< 10	< 1	0.02	< 10
N113493	205	226	220	4.16	4.51	5.4	0.08	6	< 10	< 0.5	Intf*	< 0.01	0.5	722	37	>10000	>15.00	< 10	< 1	0.07	< 10
N113494	205	226	170	4.08	4.74	5.2	0.10	12	< 10	< 0.5	Intf*	< 0.01	2.0	718	42	>10000	>15.00	< 10	< 1	0.08	< 10
N113495	205	226	90	3.84	2.57	2.6	0.15	8	< 10	< 0.5	Intf*	< 0.01	0.5	526	74	>10000	>15.00	< 10	< 1	0.10	< 10
N113496	205	226	125	4.54	5.04	4.0	< 0.01	10	< 10	< 0.5	Intf*	< 0.01	2.5	340	28	>10000	>15.00	< 10	< 1	< 0.01	< 10
N113497	205	226	15	2.68	0.86	0.6	0.38	32	10	< 0.5	12	0.06	0.5	98	79	8140	7.85	30	< 1	0.23	< 10
N113498	205	226	< 5	2.62	0.58	< 0.2	4.23	6	60	< 0.5	< 2	0.13	< 0.5	29	70	5230	5.64	10	< 1	0.05	< 10
N113499	205	226	< 5	2.42	0.72	0.2	0.78	8	80	< 0.5	4	0.04	< 0.5	44	51	7270	2.86	10	< 1	0.09	< 10
N113500	205	226	170	4.63	9.94	4.4	< 0.01	18	< 10	< 0.5	Intf*	< 0.01	3.0	510	19	>10000	>15.00	< 10	< 1	< 0.01	< 10
N113501	205	226	235	4.70	9.17	4.0	< 0.01	20	< 10	< 0.5	Intf*	< 0.01	2.5	658	23	>10000	>15.00	< 10	1	< 0.01	< 10
N113502	205	226	235	4.81	10.90	3.0	< 0.01	24	< 10	< 0.5	Intf*	< 0.01	2.0	311	14	>10000	>15.00	< 10	1	< 0.01	< 10
N113503	205	226	190	4.76	6.25	2.8	< 0.01	18	< 10	< 0.5	Intf*	< 0.01	1.5	659	36	>10000	>15.00	< 10	< 1	< 0.01	< 10
N113504	205	226	10	2.41	0.48	< 0.2	1.07	52	70	< 0.5	26	0.06	< 0.5	45	116	4480	2.19	20	< 1	0.32	< 10
N113505	205	226	15	2.64	1.29	0.8	6.20	< 2	30	< 0.5	Intf*	0.12	< 0.5	33	174	>10000	8.94	20	1	0.18	< 10
N113506	205	226	10	2.62	1.49	0.2	5.26	6	140	< 0.5	Intf*	0.32	1.5	39	159	>10000	7.60	10	< 1	0.06	< 10
N113507	205	226	< 5	2.70	0.97	< 0.2	5.22	2	200	< 0.5	< 2	0.28	7.0	65	169	9430	8.91	10	< 1	0.03	< 10
N113508	205	226	< 5	2.77	1.17	0.4	4.68	< 2	130	< 0.5	Intf*	0.30	9.5	82	173	>10000	10.10	10	< 1	< 0.01	< 10
N113509	205	226	10	2.77	0.56	< 0.2	3.99	< 2	120	< 0.5	< 2	0.80	9.0	71	165	4860	9.40	10	< 1	< 0.01	< 10
N113510	205	226	20	2.85	2.12	0.8	3.92	2	20	< 0.5	Intf*	0.12	5.0	99	129	>10000	11.75	10	< 1	0.01	< 10

CERTIFICATION: Ian Bradley

*INTERFERENCE: Cu ON Bi AND P.

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

Project : ICE-IC97-46
Comments:

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Invoice No. : I9740738
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9740738

SAMPLE	PREP CODE		Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113491	205	226	0.07	60	16	< 0.01	11	Intf*	48	< 2	< 1	< 1	0.03	< 10	< 10	10	< 10	1190
N113492	205	226	< 0.01	20	22	< 0.01	10	Intf*	34	< 2	< 1	< 1	0.01	< 10	< 10	3	< 10	712
N113493	205	226	0.01	20	22	< 0.01	17	Intf*	38	< 2	< 1	< 1	0.02	< 10	< 10	9	< 10	584
N113494	205	226	0.01	20	20	< 0.01	17	Intf*	40	< 2	< 1	< 1	0.01	< 10	< 10	8	< 10	618
N113495	205	226	0.01	20	21	< 0.01	18	Intf*	36	< 2	< 1	< 1	0.01	< 10	< 10	8	< 10	368
N113496	205	226	< 0.01	20	48	< 0.01	6	Intf*	70	< 2	< 1	< 1	0.04	< 10	< 10	3	< 10	1355
N113497	205	226	0.03	10	16	0.04	4	230	138	< 2	7	46	0.06	< 10	< 10	87	< 10	238
N113498	205	226	1.05	455	1	0.01	4	100	4	< 2	20	26	0.08	< 10	< 10	212	< 10	166
N113499	205	226	0.15	65	12	0.04	1	100	34	< 2	7	18	0.12	< 10	< 10	64	< 10	144
N113500	205	226	< 0.01	20	29	< 0.01	< 1	Intf*	54	< 2	< 1	< 1	< 0.01	< 10	< 10	< 1	< 10	1060
N113501	205	226	< 0.01	25	25	< 0.01	2	Intf*	56	< 2	< 1	< 1	< 0.01	10	< 10	1	< 10	710
N113502	205	226	< 0.01	20	43	< 0.01	5	Intf*	34	< 2	< 1	< 1	< 0.01	< 10	< 10	< 1	< 10	322
N113503	205	226	< 0.01	20	41	< 0.01	7	Intf*	36	< 2	< 1	< 1	< 0.01	< 10	< 10	< 1	< 10	158
N113504	205	226	0.04	5	27	0.10	1	350	172	< 2	17	128	0.11	< 10	< 10	114	< 10	38
N113505	205	226	2.48	655	1	0.01	33	Intf*	8	< 2	19	80	0.03	< 10	< 10	271	< 10	542
N113506	205	226	2.48	635	< 1	0.01	54	Intf*	4	< 2	28	41	0.03	< 10	< 10	210	< 10	468
N113507	205	226	4.00	995	< 1	< 0.01	61	190	< 2	< 2	32	11	0.12	< 10	< 10	185	< 10	1585
N113508	205	226	3.59	955	< 1	< 0.01	54	Intf*	2	< 2	29	12	0.17	< 10	< 10	184	< 10	2350
N113509	205	226	3.24	735	< 1	< 0.01	52	270	4	< 2	24	11	0.23	< 10	< 10	157	< 10	3040
N113510	205	226	2.78	530	< 1	< 0.01	43	Intf*	6	< 2	19	5	0.03	< 10	< 10	159	< 10	1780

CERTIFICATION: David Fowler

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

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Project : ICE-IC97-46
Comments:

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Invoice No. : 19740737
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9740737

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
N113487	205	226	0.4	2.84	2	70	< 0.5	< 2	1.58	< 0.5	75	41	597	7.22	< 10	< 1	0.03	< 10	1.61	880	< 1
N113488	205	226	0.8	3.03	< 2	360	< 0.5	< 2	1.30	0.5	15	170	487	6.12	< 10	< 1	0.06	< 10	1.85	430	< 1
N113489	205	226	0.6	2.95	< 2	320	< 0.5	< 2	1.79	1.5	21	80	1025	4.88	< 10	< 1	0.04	< 10	1.62	560	< 1
N113490	205	226	< 0.2	1.82	< 2	90	< 0.5	< 2	0.92	< 0.5	13	87	254	2.66	< 10	< 1	0.03	< 10	1.31	430	< 1
N113511	205	226	< 0.2	5.00	< 2	80	< 0.5	< 2	0.78	61.5	108	154	3470	10.25	10	< 1	< 0.01	< 10	4.13	940	< 1
N113512	205	226	< 0.2	4.12	< 2	30	< 0.5	< 2	1.31	9.5	94	80	3180	7.94	10	< 1	0.01	< 10	3.32	935	< 1

CERTIFICATION: Ian Bridden

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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WHITEHORSE, YT
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Certificate Date: 08-SEP-97
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P.O. Number :
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CERTIFICATE OF ANALYSIS A9740737

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
N113487	205	226	< 0.01	33	530	< 2	< 2	12	20	0.41	< 10	< 10	154	< 10	312
N113488	205	226	< 0.01	43	310	2	< 2	17	16	0.27	< 10	< 10	131	< 10	312
N113489	205	226	< 0.01	37	280	< 2	< 2	11	22	0.30	< 10	< 10	110	< 10	178
N113490	205	226	< 0.01	18	180	2	< 2	2	4	0.18	< 10	< 10	66	< 10	44
N113511	205	226	< 0.01	49	250	< 2	< 2	22	7	0.17	< 10	< 10	150	< 10	2620
N113512	205	226	< 0.01	39	250	< 2	< 2	22	21	0.30	< 10	< 10	165	< 10	2900

CERTIFICATION: Ian Bradley

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

To: EXPATRIATE RESOURCES LTD.
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Y1A 3S9

Project : ICE-ID97-34
Comments:

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Certificate Date: 08-SEP-97
Invoice No. : I9740694
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9740694

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
N113455	205 226	1.6	3.29	28	40	< 0.5	< 2	2.86	3.0	129	77	6980	11.15	10	< 1	< 0.01	< 10	1.85	995	5
N113456	205 226	< 0.2	2.30	< 2	60	< 0.5	< 2	1.78	1.5	27	14	79	7.60	10	< 1	0.13	< 10	1.47	965	< 1
N113457	205 226	9.0	1.36	22	10	< 0.5	Intf*	1.05	18.5	367	56	>10000	>15.00	20	3	0.03	< 10	0.82	530	11
N113458	205 226	< 0.2	3.02	6	50	< 0.5	< 2	2.71	0.5	27	66	472	3.99	10	< 1	0.11	< 10	1.96	780	< 1
N113459	205 226	< 0.2	4.71	< 2	50	< 0.5	< 2	1.13	1.5	46	105	394	7.72	10	< 1	0.10	< 10	4.83	880	< 1
N113460	205 226	0.6	5.75	14	10	< 0.5	< 2	0.64	2.0	72	191	1825	10.95	10	< 1	0.01	< 10	5.31	915	3
N113461	205 226	1.0	4.85	< 2	80	< 0.5	< 2	2.61	3.5	114	148	3460	10.55	10	< 1	< 0.01	< 10	4.16	455	2
N113462	205 226	0.6	5.23	10	30	< 0.5	< 2	0.42	1.0	114	183	4850	10.80	10	< 1	< 0.01	< 10	4.40	345	1
N113463	205 226	1.0	4.99	4	30	< 0.5	< 2	0.76	1.5	127	204	9680	11.20	10	< 1	< 0.01	< 10	4.06	295	< 1
N113464	205 226	< 0.2	5.65	6	20	< 0.5	< 2	0.55	0.5	110	210	1290	10.75	10	< 1	< 0.01	< 10	4.74	355	< 1
N113465	205 226	< 0.2	5.77	10	< 10	< 0.5	< 2	0.58	1.0	154	219	2590	10.35	10	< 1	< 0.01	< 10	5.21	400	< 1
N113466	205 226	0.6	3.62	8	10	< 0.5	< 2	0.22	1.5	146	127	6110	12.90	10	< 1	< 0.01	< 10	2.88	175	1
N113467	205 226	< 0.2	5.40	< 2	10	< 0.5	< 2	0.47	3.5	98	134	388	10.60	10	1	< 0.01	< 10	4.56	275	< 1
N113468	205 226	< 0.2	2.25	8	10	< 0.5	< 2	0.10	< 0.5	77	52	254	>15.00	< 10	< 1	< 0.01	< 10	1.60	110	4
N113469	205 226	0.4	2.93	6	< 10	< 0.5	< 2	0.11	< 0.5	89	91	726	13.15	10	< 1	< 0.01	< 10	2.02	130	< 1
N113470	205 226	< 0.2	2.71	2	< 10	< 0.5	< 2	0.12	< 0.5	97	100	130	12.00	< 10	1	< 0.01	< 10	1.82	120	< 1
N113471	205 226	< 0.2	3.20	8	< 10	< 0.5	< 2	0.17	< 0.5	90	116	146	12.35	10	3	< 0.01	< 10	2.25	140	< 1
N113472	205 226	< 0.2	2.72	2	< 10	< 0.5	< 2	0.18	< 0.5	107	120	793	12.65	< 10	< 1	< 0.01	< 10	1.82	130	< 1
N113473	205 226	< 0.2	3.55	8	30	< 0.5	< 2	0.22	3.5	100	107	188	13.50	10	< 1	< 0.01	< 10	2.52	260	1
N113474	205 226	0.2	5.23	6	80	< 0.5	< 2	0.74	2.5	89	143	1215	11.70	10	1	< 0.01	< 10	4.52	710	2
N113475	205 226	< 0.2	4.46	4	80	< 0.5	< 2	1.71	1.0	35	159	246	7.00	10	< 1	0.04	< 10	4.52	745	< 1
N113476	205 226	0.2	5.39	8	80	< 0.5	< 2	0.94	4.0	46	164	345	9.08	10	1	< 0.01	< 10	5.40	1005	< 1
N113477	205 226	0.2	4.90	4	30	< 0.5	< 2	1.93	11.5	37	137	143	7.81	10	< 1	0.02	< 10	4.54	880	< 1
N113478	205 226	< 0.2	3.98	< 2	40	< 0.5	< 2	3.40	1.0	28	90	92	5.28	10	< 1	< 0.01	< 10	2.60	600	< 1

CERTIFICATION: Ian Bridden

* INTERFERENCE: Cu on Bi and P

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

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C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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WHITEHORSE, YT
Y1A 3S9

Project : ICE-ID97-34
Comments:

Pa ber : 1-B
Tota ges : 1
Certificate Date: 08-SEP-97
Invoice No. : I9740694
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9740694

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
N113455	205	226	< 0.01	43	630	< 2	2	10	22	0.53	< 10	< 10	214	< 10	160
N113456	205	226	< 0.01	19	690	< 2	2	3	19	0.73	< 10	< 10	224	< 10	126
N113457	205	226	< 0.01	26	Intf*	66	2	1	37	0.10	< 10	< 10	199	< 10	6880
N113458	205	226	0.01	75	140	< 2	< 2	3	18	0.20	< 10	< 10	92	< 10	98
N113459	205	226	< 0.01	42	330	< 2	< 2	19	12	0.45	< 10	< 10	220	< 10	154
N113460	205	226	< 0.01	45	190	< 2	< 2	23	4	0.30	< 10	< 10	212	< 10	564
N113461	205	226	< 0.01	35	120	< 2	< 2	19	6	0.23	< 10	< 10	152	< 10	606
N113462	205	226	< 0.01	46	140	< 2	4	20	2	0.22	< 10	< 10	176	< 10	114
N113463	205	226	< 0.01	52	140	< 2	< 2	19	3	0.25	< 10	< 10	174	< 10	46
N113464	205	226	< 0.01	64	170	< 2	< 2	21	3	0.31	< 10	< 10	200	< 10	78
N113465	205	226	< 0.01	61	200	< 2	< 2	22	3	0.31	< 10	< 10	206	< 10	88
N113466	205	226	< 0.01	33	100	< 2	< 2	15	1	0.18	< 10	< 10	130	< 10	28
N113467	205	226	< 0.01	41	150	< 2	< 2	23	3	0.31	< 10	< 10	188	< 10	760
N113468	205	226	< 0.01	16	40	< 2	< 2	9	< 1	0.09	< 10	< 10	87	< 10	50
N113469	205	226	< 0.01	19	< 10	< 2	< 2	11	1	0.10	< 10	< 10	88	< 10	30
N113470	205	226	< 0.01	20	< 10	< 2	< 2	10	< 1	0.08	< 10	< 10	75	< 10	88
N113471	205	226	< 0.01	23	< 10	< 2	< 2	12	1	0.11	< 10	< 10	93	< 10	204
N113472	205	226	< 0.01	20	< 10	< 2	< 2	10	1	0.08	< 10	< 10	75	< 10	48
N113473	205	226	< 0.01	23	< 10	< 2	< 2	14	1	0.17	< 10	< 10	128	< 10	944
N113474	205	226	< 0.01	37	150	< 2	< 2	21	6	0.29	< 10	< 10	189	< 10	822
N113475	205	226	< 0.01	41	220	< 2	< 2	18	14	0.37	< 10	< 10	190	< 10	218
N113476	205	226	< 0.01	45	240	< 2	4	22	10	0.35	< 10	< 10	215	< 10	1505
N113477	205	226	< 0.01	43	230	< 2	< 2	15	14	0.37	< 10	< 10	202	< 10	2210
N113478	205	226	< 0.01	38	270	< 2	2	10	21	0.30	< 10	< 10	142	< 10	118

CERTIFICATION:

*INTERFERENCE: Cu on Bi and P

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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 : ICE-ID97-35
Comments:

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Certificate Date: 08-SEP-97
Invoice No. : I9740693
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9740693

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
N113482	205	294	< 0.2	3.01	6	190	< 0.5	< 2	1.89	1.5	26	37	79	5.50	10	< 1	0.01	< 10	1.92	740	< 1
N113483	205	294	< 0.2	2.75	6	80	< 0.5	< 2	1.82	1.0	25	32	64	5.34	10	< 1	< 0.01	< 10	1.94	710	< 1
N113484	205	294	< 0.2	3.16	< 2	90	< 0.5	< 2	2.24	1.0	30	35	85	5.90	10	< 1	< 0.01	< 10	2.12	805	< 1
N113485	205	294	< 0.2	1.76	6	50	< 0.5	< 2	4.65	1.0	21	21	71	3.83	< 10	< 1	< 0.01	< 10	1.54	680	< 1
N113486	205	294	< 0.2	3.16	2	200	< 0.5	< 2	4.27	1.5	31	44	74	6.53	10	1	< 0.01	< 10	2.34	1160	< 1

CERTIFICATION: Ian Pontier

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

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Project : ICE-ID97-35
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P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9740693

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
N113482	205	294	< 0.01	35	420	< 2	< 2	8	24	0.46	< 10	< 10	165	< 10	76
N113483	205	294	< 0.01	36	380	< 2	2	8	16	0.46	< 10	< 10	161	< 10	74
N113484	205	294	< 0.01	36	470	< 2	2	8	20	0.47	< 10	< 10	163	< 10	86
N113485	205	294	< 0.01	22	390	< 2	< 2	7	37	0.28	< 10	< 10	98	< 10	56
N113486	205	294	< 0.01	34	440	< 2	< 2	20	48	0.33	< 10	< 10	190	< 10	88

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

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Project : ICE-ROCK
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CERTIFICATE OF ANALYSIS A9740494

SAMPLE	PREP CODE		Au ppb FA+AA	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
N112720	205	226	< 5	< 0.2	0.19	12	10	< 0.5	< 2	1.37	< 0.5	42	489	7	3.06	< 10	2	0.02	< 10	12.40	550

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Y1A 3S9

Project : ICE-ROCK
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CERTIFICATE OF ANALYSIS A9740494

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N112720	205	226	< 1	< 0.01	841	30	< 2	< 2	6	38	< 0.01	< 10	< 10	17	< 10	18

CERTIFICATION: [signature]

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

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CERTIFICATE OF ANALYSIS A9740472

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N113408	244 --	175	0.87
N113418	244 --	< 5	0.07
N113419	244 --	80	1.56
N113420	244 --	50	0.19

CERTIFICATION: Said Leinad

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

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Account : MPO

CERTIFICATE OF ANALYSIS A9740471

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N113373	244 --	< 5	0.17
N113374	244 --	20	-----
N113375	244 --	15	0.76
N113376	244 --	40	-----
N113377	244 --	10	0.49
N113378	244 --	15	0.52
N113395	244 --	110	0.26
N113399	244 --	25	0.56
N113400	244 --	15	0.20

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212 Brooksbank Ave., North Vancouver
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Project : ICE-ID97-31
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CERTIFICATE OF ANALYSIS A9740347

SAMPLE	PREP CODE		Cu %	Zn %								
N133449	244	--	-----	1.83								
N113454	244	--	4.11	-----								

CERTIFICATION: Said Azemoun

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British Columbia, Canada V7J 2C1
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Project : ICE-ID97-30
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Account : MPO

CERTIFICATE OF ANALYSIS A9739992

SAMPLE	PREP CODE		Cu %
N113419	244	--	1.49

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Project : ICE-IC97-40
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Account : MPO

CERTIFICATE OF ANALYSIS A9739577

SAMPLE	PREP CODE	Spec Gr S.G.
N113313	244 --	2.83
N113314	244 --	2.68
N113315	244 --	2.67
N113316	244 --	2.71
N113317	244 --	2.67
N113318	244 --	2.72
N113319	244 --	2.83

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Project : ICE-IC97-41
Comments:

Certificate Date: 28-AUG-97
Invoice No. : I9739571
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9739571

SAMPLE	PREP CODE	Spec Gr S.G.
N113329	244 --	2.91
N113330	244 --	2.86
N113331	244 --	2.89
N113332	244 --	2.87
N113333	244 --	2.80
N113334	244 --	2.84

CERTIFICATION: David Lehnert

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

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CERTIFICATE OF ANALYSIS A9739570

SAMPLE	PREP CODE	Spec Gr S.G.
N113309	244 --	2.82
N113310	244 --	2.88
N113311	244 --	2.93
N113312	244 --	2.81

CERTIFICATION: Said Eirnaud

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British Columbia, Canada V7J 2C1
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Project : ICE-IC97-39
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CERTIFICATE OF ANALYSIS A9739569

SAMPLE	PREP CODE	Spec Gr S.G.
N113280	244 --	2.86
N113281	244 --	2.90
N113282	244 --	2.91
N113283	244 --	2.68
N113284	244 --	2.81
N113285	244 --	2.89
N113286	244 --	2.53
N113287	244 --	2.11
N113288	244 --	2.64
N113289	244 --	2.56
N113290	244 --	2.54
N113291	244 --	2.59

CERTIFICATION: Said Leinad

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

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Y1A 3S9

Project : ICE-IC97-38
Comments:

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Certificate Date: 04-SEP-97
Invoice No. : 19739567
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Account : MPO

CERTIFICATE OF ANALYSIS A9739567

SAMPLE	PREP CODE	Spec Gr S.G.
N113265	244 --	3.67
N113266	244 --	3.61
N113267	244 --	3.57
N113268	244 --	3.29
N113269	244 --	3.21
N113270	244 --	3.00
N113271	244 --	3.00
N113272	244 --	3.38
N113273	244 --	3.56
N113274	244 --	3.64
N113275	244 --	3.35

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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 : ICE-IC97-37
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 04-SEP-97
Invoice No. : I9739566
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9739566

SAMPLE	PREP CODE	Spec Gr S.G.
N113243	244 --	2.71
N113244	244 --	2.71
N113245	244 --	2.71
N113246	244 --	2.67
N113247	244 --	2.75
N113248	244 --	2.67
N113249	244 --	2.64
N113250	244 --	2.77
N113251	244 --	2.81
N113252	244 --	3.03
N113253	244 --	2.97
N113254	244 --	2.98
N113255	244 --	2.92
N113256	244 --	2.79
N113257	244 --	2.87
N113258	244 --	2.73

CERTIFICATION: Said Leinad

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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Project : ICE-IC97-36
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 02-SEP-97
Invoice No. : I9739564
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9739564

SAMPLE	PREP CODE		Spec Gr S.G.
N113233	244	--	2.92
N113234	244	--	3.28
N113235	244	--	3.04
N113237	244	--	3.48
N113239	244	--	2.99

CERTIFICATION:

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Analytical Chemists * Geochemists * Registered Assayers

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

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Project : ICE-IC97-36
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 04-SEP-97
Invoice No. : I9739563
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9739563

SAMPLE	PREP CODE	Spec Gr S.G.
N113221	244 --	2.84
N113222	244 --	2.71
N113223	244 --	2.92
N113224	244 --	2.80
N113225	244 --	2.54
N113226	244 --	2.60
N113227	244 --	2.80
N113228	244 --	2.78
N113229	244 --	2.63
N113230	244 --	2.44
N113231	244 --	2.78
N113232	244 --	2.45
N113236	244 --	2.92
N113238	244 --	2.80
N113240	244 --	2.70
N113241	244 --	2.78

CERTIFICATION: Said Ceinad

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Analytical Chemists * Geochemists * Registered Assayers

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

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Project : ICE-IC97-35
Comments:

Page Number :1
Total Pages :1
Certificate Date: 07-SEP-97
Invoice No. :I9739562
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9739562

SAMPLE	PREP CODE	Spec Gr S.G.
N113206	244 --	3.14
N113207	244 --	3.48
N113208	244 --	2.78
N113209	244 --	2.78
N113210	244 --	2.82
N113211	244 --	2.81
N113212	244 --	3.66
N113213	244 --	2.57
N113214	244 --	2.68

CERTIFICATION: David Chang

Chemex Labs Ltd.

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

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Project : ICE-IC97-35
Comments:

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Total Pages : 1
Certificate Date: 28-AUG-97
Invoice No. : I9739560
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9739560

SAMPLE	PREP CODE	Spec Gr S.G.
N113201	244 --	2.73
N113202	244 --	2.79
N113203	244 --	2.72
N113204	244 --	3.20
N113205	244 --	3.38
N113215	244 --	2.52
N113216	244 --	2.70

CERTIFICATION:

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

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Project : ICE-ID97-31
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 02-SEP-97
Invoice No. : I9739337
P.O. Number :
Account : MPO

*PLEASE NOTE

CERTIFICATE OF ANALYSIS A9739337

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N113453	208	294	440	3.42	6.2	0.10	20	< 10	< 0.5	Intf*	0.19	7.0	413	71	>10000	>15.00	< 10	1	< 0.01	< 10	0.05

CERTIFICATION: Stewart Bichlmaier

*INTERFERENCE: Cu ON Bi AND P.

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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C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Y1A 3S9

Project : ICE-ID97-31
Comments:

Certificate Date: 02-SEP-97
Invoice No. : I9739337
P.O. Number :
Account : MPO

*PLEASE NOTE

CERTIFICATE OF ANALYSIS A9739337

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113453	208	294	80	12	< 0.01	9	Intf*	56	< 2	< 1	3	0.01	< 10	< 10	19	< 10	720

CERTIFICATION: Ian J. Bradden

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

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

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Project : ICE-ID97-31
Comments:

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Total Pages : 1
Certificate Date: 31-AUG-97
Invoice No. : I9739336
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9739336

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
N113432	205	294	< 0.2	3.36	< 2	30	< 0.5	< 2	3.23	< 0.5	27	80	64	5.79	10	< 1	< 0.01	< 10	3.02	915	< 1
N113433	205	294	< 0.2	3.69	< 2	30	< 0.5	< 2	3.66	< 0.5	27	77	87	5.79	10	< 1	< 0.01	< 10	2.97	1075	< 1
N113434	205	294	< 0.2	3.59	< 2	20	< 0.5	2	4.68	< 0.5	27	59	79	5.91	10	< 1	< 0.01	< 10	3.07	1145	< 1
N113435	205	294	< 0.2	4.25	< 2	120	< 0.5	2	2.22	1.5	32	113	185	7.76	10	< 1	0.04	< 10	3.99	1170	< 1
N113436	205	294	< 0.2	4.45	< 2	50	< 0.5	4	1.53	0.5	31	115	252	9.80	10	< 1	0.01	< 10	3.71	1085	< 1
N113437	205	294	0.2	4.37	< 2	140	< 0.5	2	2.77	2.0	33	103	409	8.67	10	< 1	0.05	< 10	3.84	975	< 1
N113438	205	294	< 0.2	3.93	< 2	160	< 0.5	< 2	2.22	1.0	30	125	129	6.93	10	< 1	< 0.01	< 10	4.06	740	< 1
N113439	205	294	< 0.2	3.49	< 2	340	< 0.5	< 2	2.19	< 0.5	31	143	133	5.87	10	< 1	0.02	< 10	3.66	745	< 1
N113440	205	294	< 0.2	3.81	< 2	320	< 0.5	< 2	2.11	< 0.5	29	92	69	5.45	10	< 1	0.04	< 10	3.70	780	< 1
N113441	205	294	< 0.2	4.20	< 2	140	< 0.5	2	3.00	< 0.5	33	87	69	6.53	10	< 1	0.02	< 10	3.78	1150	< 1
N113442	205	294	< 0.2	3.71	< 2	440	< 0.5	< 2	1.53	< 0.5	30	76	111	5.65	10	< 1	0.03	< 10	3.95	895	< 1
N113443	205	294	< 0.2	3.90	< 2	1350	< 0.5	2	2.21	< 0.5	31	75	80	6.39	10	< 1	0.01	< 10	3.61	855	< 1
N113444	205	294	< 0.2	4.03	< 2	60	< 0.5	< 2	1.27	< 0.5	29	111	146	9.76	10	< 1	0.05	< 10	3.34	875	< 1
N113445	205	294	0.8	3.79	< 2	80	< 0.5	2	1.13	1.5	34	107	1335	10.65	10	< 1	0.10	< 10	2.71	710	< 1
N113446	205	294	2.0	3.97	< 2	30	< 0.5	10	0.95	0.5	33	121	3260	12.40	10	< 1	0.05	< 10	2.57	670	< 1
N113447	205	294	0.8	4.96	< 2	70	< 0.5	2	0.78	< 0.5	33	127	1200	13.40	20	< 1	0.01	< 10	3.30	780	< 1
N113448	205	294	0.6	4.37	< 2	320	< 0.5	< 2	2.56	1.5	30	180	148	6.42	10	< 1	0.01	< 10	3.61	655	< 1
N113449	205	294	4.4	3.85	< 2	20	< 0.5	< 2	2.14	23.5	43	102	228	10.35	10	4	0.05	< 10	2.49	740	< 1
N113450	205	294	< 0.2	3.91	< 2	90	< 0.5	2	2.79	< 0.5	26	99	110	5.14	10	< 1	0.05	< 10	2.50	740	< 1
N113451	205	294	0.2	3.06	< 2	30	< 0.5	2	1.85	4.0	31	82	92	5.65	10	< 1	0.03	< 10	2.82	790	< 1
N113452	205	294	< 0.2	3.45	< 2	60	< 0.5	2	2.21	9.5	87	38	2380	9.00	10	< 1	0.02	< 10	2.41	1440	< 1
N113454	205	294	0.6	4.60	2	1280	< 0.5	Intf*	1.79	13.0	82	192	>10000	9.71	10	< 1	0.14	< 10	2.25	555	< 1

CERTIFICATION: Stan Bichler

* INTERFERENCE: HIGH Cu on Bi and P

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 : ICE-ID97-31
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 31-AUG-97
Invoice No. : I9739336
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9739336

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
N113432	205	294	0.02	35	320	< 2	< 2	10	17	0.34	< 10	< 10	153	< 10	76
N113433	205	294	0.01	38	380	< 2	< 2	8	28	0.34	< 10	< 10	154	< 10	84
N113434	205	294	< 0.01	44	320	< 2	< 2	8	36	0.37	< 10	< 10	153	< 10	80
N113435	205	294	0.01	44	320	< 2	< 2	14	25	0.41	< 10	< 10	164	< 10	438
N113436	205	294	0.01	40	310	< 2	< 2	12	22	0.42	< 10	< 10	184	< 10	688
N113437	205	294	< 0.01	39	330	< 2	< 2	17	22	0.43	< 10	< 10	204	< 10	732
N113438	205	294	0.03	42	330	< 2	< 2	19	15	0.45	< 10	< 10	190	< 10	464
N113439	205	294	0.03	50	320	< 2	< 2	12	24	0.37	< 10	< 10	124	< 10	104
N113440	205	294	0.03	38	350	< 2	< 2	8	24	0.36	< 10	< 10	111	< 10	88
N113441	205	294	0.02	40	520	< 2	< 2	16	32	0.35	< 10	< 10	146	< 10	106
N113442	205	294	0.02	42	400	< 2	< 2	9	19	0.43	< 10	< 10	121	< 10	84
N113443	205	294	0.01	36	370	< 2	< 2	10	30	0.42	< 10	< 10	156	< 10	136
N113444	205	294	< 0.01	37	340	< 2	< 2	16	12	0.44	< 10	< 10	189	< 10	438
N113445	205	294	< 0.01	41	330	6	< 2	15	15	0.41	< 10	< 10	181	< 10	596
N113446	205	294	< 0.01	42	340	6	< 2	15	16	0.44	< 10	< 10	206	< 10	286
N113447	205	294	< 0.01	43	370	4	< 2	16	16	0.45	< 10	< 10	219	< 10	346
N113448	205	294	< 0.01	49	280	< 2	< 2	18	64	0.35	< 10	< 10	176	< 10	848
N113449	205	294	< 0.01	48	300	18	< 2	15	30	0.34	< 10	< 10	170	< 10	>10000
N113450	205	294	0.03	44	300	< 2	< 2	7	14	0.30	< 10	< 10	117	< 10	164
N113451	205	294	0.04	37	340	2	< 2	9	11	0.37	< 10	< 10	150	< 10	1340
N113452	205	294	< 0.01	30	510	< 2	< 2	25	16	0.49	< 10	< 10	234	< 10	2320
N113454	205	294	0.01	52	Intf*	14	< 2	21	37	0.10	< 10	< 10	128	< 10	2700

CERTIFICATION: Stuart Bichlmaier

*INTERFERENCE: HIGH Cu on Bi and P

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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Y1A 3S9

Project : ICE-ID97-28
Comments:

Page er : 1
Total : 1
Certificate Date: 25-AUG-97
Invoice No. : I9739093
P.O. Number :
Account : MPO

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9739093

SAMPLE	PREP CODE		Cu %									
N113374	244	--	1.11									
N113376	244	--	2.10									

CERTIFICATION:

* FOR PROJECT DESCRIPTION

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : ICE-ID97-30
Comments:

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Total :1
Certificate Date: 27-AUG-97
Invoice No. :19738340
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9738340

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113409	208	226	50	0.70	2	1.64	< 10	60	< 5	< 10	1.07	5	130	110	6860	15.90	< 10	0.02	0.68	640	< 5
N113410	208	294	260	4.81	13	0.62	30	< 20	< 5	< 10	0.11	< 5	515	70	46500	28.0	< 10	< 0.01	0.01	350	15
N113411	208	294	380	2.56	16	0.13	20	< 20	< 5	< 10	0.06	< 5	640	70	25500	28.8	< 10	< 0.01	< 0.01	200	20
N113412	208	294	245	2.43	14	0.14	40	20	< 5	20	0.10	5	745	100	23500	23.8	< 10	< 0.01	0.01	500	20
N113413	208	294	405	3.25	7	0.05	20	< 20	< 5	< 10	0.05	15	1015	50	31000	>30.0	< 10	< 0.01	< 0.01	190	35
N113414	208	294	425	2.77	7	0.07	30	20	< 5	< 10	0.07	35	910	50	27100	>30.0	< 10	< 0.01	0.01	370	30
N113415	208	294	380	1.90	5	0.03	90	< 20	< 5	< 10	0.48	25	715	80	18500	25.7	< 10	< 0.01	0.18	280	25
N113416	208	294	325	1.58	5	0.06	50	< 20	< 5	< 10	0.05	25	575	100	15090	22.5	< 10	< 0.01	< 0.01	200	15
N113417	208	226	475	3.16	8	0.27	80	< 20	< 5	< 10	0.05	15	805	70	30900	>30.0	< 10	< 0.01	0.06	220	30

CERTIFICATION: Ian Bichler

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

Project : ICE-ID97-30
Comments:

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Total : 1
Certificate Date: 27-AUG-97
Invoice No. : I9738340
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9738340

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	Spec Gr S.G.
N113409	208	226	< 0.01	30	2700	55	< 10	< 5	20	< 0.01	< 20	< 20	220	< 20	3440	3.02
N113410	208	294	< 0.01	25	< 100	60	< 10	< 5	< 5	< 0.01	< 20	< 20	40	< 20	2350	3.77
N113411	208	294	< 0.01	20	< 100	65	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	1405	3.75
N113412	208	294	< 0.01	15	< 100	55	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	2610	3.48
N113413	208	294	< 0.01	25	< 100	75	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	2390	4.17
N113414	208	294	< 0.01	30	< 100	30	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	10850	4.00
N113415	208	294	< 0.01	20	< 100	45	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	5390	3.62
N113416	208	294	< 0.01	15	< 100	25	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	5910	3.44
N113417	208	226	< 0.01	25	< 100	60	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	3610	3.92

CERTIFICATION: Stewart Hamilton

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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-ID97-30
Comments:

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Total s : 1
Certificate Date: 26-AUG-97
Invoice No. : I9738339
P.O. Number :
Account : MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9738339

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
N113403	205	294	< 0.2	3.41	< 2	290	< 0.5	< 2	4.20	< 0.5	32	97	77	6.35	10	< 1	0.01	< 10	2.18	1330	1
N113404	205	226	1.0	3.05	< 2	40	< 0.5	4	3.66	< 0.5	164	55	1315	>15.00	10	2	0.15	< 10	2.44	1290	5
N113405	205	294	< 0.2	3.39	< 2	160	< 0.5	< 2	3.64	< 0.5	39	122	58	7.17	10	< 1	0.01	< 10	2.63	1175	1
N113406	205	226	< 0.2	3.97	< 2	260	< 0.5	< 2	3.47	< 0.5	41	125	74	8.50	10	1	0.02	< 10	2.84	1200	< 1
N113407	205	294	3.0	3.96	< 2	130	< 0.5	< 2	1.61	4.0	76	97	565	9.86	10	< 1	0.05	< 10	2.86	1000	1
N113408	205	294	6.4	2.74	16	20	< 0.5	< 2	0.74	9.5	143	67	7160	14.75	10	3	0.03	< 10	1.60	875	8
N113418	205	226	< 0.2	2.72	< 2	90	< 0.5	< 2	3.70	2.0	128	42	591	11.05	10	< 1	0.09	< 10	2.93	1125	1
N113419	205	294	1.2	5.49	< 2	30	< 0.5	Intf*	0.34	7.0	211	177	>10000	>15.00	10	1	0.01	< 10	3.66	735	1
N113420	205	294	0.6	5.81	< 2	10	< 0.5	< 2	1.35	< 0.5	136	174	1535	14.40	20	1	0.04	< 10	5.13	455	1
N113421	205	226	< 0.2	3.22	< 2	30	< 0.5	< 2	0.98	< 0.5	43	51	312	8.96	< 10	< 1	0.04	< 10	1.56	785	< 1
N113422	205	294	< 0.2	2.76	< 2	50	< 0.5	< 2	1.64	< 0.5	41	52	113	8.10	10	1	0.04	< 10	2.29	1305	< 1
N113423	205	226	1.2	4.77	< 2	50	< 0.5	< 2	0.32	8.5	43	116	557	13.30	10	1	0.06	< 10	2.81	635	< 1
N113424	205	226	1.2	3.69	2	10	< 0.5	2	0.20	1.5	70	86	248	>15.00	10	< 1	0.07	< 10	1.85	430	1
N113425	205	226	0.6	4.18	< 2	110	< 0.5	< 2	0.44	5.5	51	115	337	10.85	10	< 1	0.02	< 10	3.25	660	1
N113426	205	226	0.6	3.56	< 2	70	< 0.5	< 2	3.17	14.0	32	144	202	6.82	10	1	0.07	< 10	3.39	720	< 1
N113427	205	226	< 0.2	3.91	< 2	90	< 0.5	< 2	2.98	< 0.5	39	74	202	7.01	10	1	0.06	< 10	3.27	900	< 1
N113428	205	226	0.4	4.17	< 2	150	< 0.5	2	2.55	5.0	46	87	1320	8.65	10	< 1	0.07	< 10	3.52	915	1
N113429	205	226	1.4	3.53	< 2	70	< 0.5	6	2.35	5.0	46	48	1595	8.04	10	1	0.03	< 10	2.87	600	1
N113430	205	226	1.0	4.10	< 2	40	< 0.5	2	2.23	5.0	41	87	604	9.38	10	< 1	0.03	< 10	3.53	705	1
N113431	205	294	< 0.2	3.09	< 2	70	< 0.5	< 2	3.30	0.5	30	50	126	5.01	10	< 1	0.05	< 10	2.42	710	< 1

CERTIFICATION: Stewart Bichler

*INTERFERENCES: Cu ON Bi AND P.

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

Project : ICE-ID97-30
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 26-AUG-97
Invoice No. : I9738339
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9738339

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	Spec Gr S.G.
N113403	205	294	< 0.01	44	450	< 2	< 2	22	41	0.33	< 10	< 10	197	< 10	78	-----
N113404	205	226	< 0.01	44	830	< 2	< 2	11	39	0.15	< 10	< 10	265	< 10	118	-----
N113405	205	294	0.01	47	520	< 2	< 2	35	43	0.01	< 10	< 10	211	< 10	138	-----
N113406	205	226	0.02	48	510	< 2	< 2	35	37	0.01	< 10	< 10	250	< 10	172	-----
N113407	205	294	0.02	43	480	10	< 2	28	26	< 0.01	< 10	< 10	203	< 10	1025	-----
N113408	205	294	< 0.01	38	610	64	< 2	15	12	< 0.01	< 10	< 10	158	< 10	3650	2.99
N113418	205	226	< 0.01	28	1010	2	< 2	15	60	< 0.01	< 10	< 10	159	< 10	3140	2.79
N113419	205	294	< 0.01	54	Intf*	4	< 2	19	8	0.01	< 10	< 10	199	< 10	3160	-----
N113420	205	294	< 0.01	58	310	< 2	< 2	20	12	< 0.01	< 10	< 10	155	< 10	488	-----
N113421	205	226	< 0.01	45	540	< 2	< 2	27	13	< 0.01	< 10	< 10	173	< 10	184	-----
N113422	205	294	0.01	42	520	< 2	< 2	26	17	< 0.01	< 10	< 10	160	< 10	120	-----
N113423	205	226	< 0.01	45	330	< 2	< 2	25	10	0.15	< 10	< 10	216	< 10	1630	-----
N113424	205	226	< 0.01	34	330	10	< 2	14	8	0.05	< 10	< 10	148	< 10	342	-----
N113425	205	226	< 0.01	42	300	2	< 2	18	33	0.20	< 10	< 10	175	< 10	1420	-----
N113426	205	226	0.01	46	210	4	2	17	46	0.27	< 10	< 10	157	< 10	4820	-----
N113427	205	226	0.01	42	370	< 2	< 2	28	42	0.24	< 10	< 10	239	< 10	576	-----
N113428	205	226	0.03	54	330	6	< 2	31	41	< 0.01	< 10	< 10	243	< 10	926	-----
N113429	205	226	< 0.01	37	310	16	< 2	15	21	0.30	< 10	< 10	169	< 10	1545	-----
N113430	205	226	< 0.01	48	300	10	2	17	32	0.37	< 10	< 10	186	< 10	1195	-----
N113431	205	294	0.01	36	310	< 2	< 2	16	28	0.31	< 10	< 10	151	< 10	174	-----

CERTIFICATION:

*INTERFERENCES: Cu ON Bi AND P.

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-ID97-28
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 25-AUG-97
Invoice No. : I9738311
P.O. Number :
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SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N113396	208	226	40	0.99	2.8	1.38	< 2	10	< 0.5	< 2	0.08	1.5	455	69	9060	>15.00	10	< 1	0.05	< 10	0.80
N113397	208	226	80	2.16	7.6	0.10	< 2	10	< 0.5	Intf*	0.09	8.0	783	42	>10000	>15.00	< 10	< 1	0.07	< 10	0.03
N113398	208	226	65	2.27	7.0	0.08	< 2	10	< 0.5	Intf*	0.08	3.5	876	39	>10000	>15.00	< 10	< 1	0.06	< 10	0.02

CERTIFICATION: Hartt Bichler

*INTERFERENCES: Cu ON Bi AND P.

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

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

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SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Spec Gr S.G.
N113396	208	226	130	11	< 0.01	9	30	< 2	< 2	4	5	< 0.01	< 10	< 10	75	< 10	232	3.36
N113397	208	226	20	17	< 0.01	4	Intf*	< 2	< 2	< 1	< 1	< 0.01	< 10	< 10	4	< 10	1020	4.12
N113398	208	226	15	43	< 0.01	3	Intf*	< 2	< 2	< 1	< 1	< 0.01	< 10	< 10	4	< 10	452	3.97

CERTIFICATION:

*INTERFERENCES: Cu ON Bi AND P.

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

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WHITEHORSE, YT
Y1A 3S9

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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9738310

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
N113371	205	294	0.8	5.31	< 2	140	< 0.5	< 2	2.60	3.0	34	147	3750	12.10	10	< 1	0.03	< 10	4.23	1160	< 1
N113372	205	294	< 0.2	5.57	< 2	60	< 0.5	< 2	2.58	2.5	35	165	191	10.80	20	< 1	< 0.01	< 10	4.72	1250	< 1
N113373	205	294	0.2	5.07	< 2	40	< 0.5	< 2	1.41	2.0	32	151	1620	11.75	10	< 1	< 0.01	< 10	4.12	995	< 1
N113374	205	294	2.0	4.10	< 2	10	< 0.5	Intf*	0.98	5.0	32	122	>10000	>15.00	20	< 1	< 0.01	< 10	3.04	725	10
N113375	205	294	1.6	4.76	< 2	10	< 0.5	< 2	0.82	3.0	39	143	7430	14.05	20	< 1	< 0.01	< 10	3.66	760	4
N113376	205	294	5.6	4.59	< 2	10	< 0.5	Intf*	0.64	5.0	56	128	>10000	>15.00	20	< 1	< 0.01	< 10	3.26	670	3
N113377	205	294	0.8	5.04	< 2	10	< 0.5	< 2	1.76	2.0	42	143	5000	13.95	20	< 1	0.02	< 10	3.62	755	1
N113378	205	294	1.2	6.03	< 2	20	< 0.5	< 2	1.52	2.0	40	156	5570	14.50	20	< 1	0.01	< 10	4.25	810	3
N113379	205	294	0.6	4.64	< 2	130	< 0.5	< 2	1.05	1.0	98	97	945	12.45	10	< 1	< 0.01	< 10	3.57	450	3
N113380	205	294	0.6	4.32	< 2	20	< 0.5	< 2	0.42	1.0	112	95	652	11.65	10	< 1	< 0.01	< 10	3.31	260	< 1
N113381	205	294	0.2	3.72	< 2	30	< 0.5	< 2	0.24	1.5	115	103	296	12.30	10	< 1	< 0.01	< 10	2.76	200	< 1
N113382	205	294	0.6	2.19	< 2	10	< 0.5	< 2	0.43	0.5	57	86	608	12.00	< 10	< 1	< 0.01	< 10	1.66	165	1
N113383	205	294	0.6	2.93	< 2	10	< 0.5	< 2	0.14	1.0	86	116	183	11.15	< 10	< 1	< 0.01	< 10	2.14	140	3
N113384	205	294	0.2	3.88	< 2	10	< 0.5	< 2	0.13	0.5	136	127	81	13.45	10	< 1	< 0.01	< 10	2.78	180	2
N113385	205	294	0.6	2.42	< 2	10	< 0.5	< 2	0.24	0.5	231	94	61	>15.00	10	< 1	< 0.01	< 10	1.72	135	1
N113386	205	226	< 0.2	4.21	< 2	< 10	< 0.5	< 2	0.23	1.0	213	87	32	14.30	10	< 1	< 0.01	< 10	3.02	210	2
N113387	205	226	< 0.2	2.72	< 2	10	< 0.5	< 2	1.29	0.5	124	90	459	10.30	< 10	< 1	< 0.01	< 10	2.12	175	< 1
N113388	205	226	0.2	2.80	4	< 10	< 0.5	< 2	0.19	4.5	165	82	113	>15.00	10	< 1	< 0.01	< 10	1.98	135	3
N113389	205	226	< 0.2	5.37	< 2	< 10	< 0.5	< 2	0.30	4.0	143	140	32	12.40	10	< 1	< 0.01	< 10	3.91	270	< 1
N113390	205	226	0.2	4.35	< 2	< 10	< 0.5	< 2	0.22	5.0	178	101	151	14.80	10	< 1	< 0.01	< 10	2.96	240	5
N113391	205	226	0.2	4.94	< 2	< 10	< 0.5	< 2	0.56	2.5	169	138	134	14.35	10	< 1	< 0.01	< 10	3.28	300	2
N113392	205	226	0.4	2.64	4	10	< 0.5	< 2	0.07	< 0.5	399	78	181	>15.00	10	< 1	0.01	< 10	1.67	190	5
N113393	205	226	0.4	4.10	< 2	10	< 0.5	< 2	0.10	4.0	232	96	358	>15.00	10	< 1	0.02	< 10	2.51	290	2
N113394	205	226	1.6	1.71	12	10	< 0.5	< 2	0.19	4.5	344	67	543	>15.00	10	< 1	0.02	< 10	1.08	150	6
N113395	205	226	1.4	5.06	< 2	10	< 0.5	< 2	0.11	1.5	60	151	2680	>15.00	10	< 1	0.02	< 10	3.04	560	3
N113399	205	226	1.4	4.39	< 2	10	< 0.5	< 2	0.06	5.0	246	101	5560	>15.00	10	< 1	0.08	< 10	2.23	325	3
N113400	205	226	0.8	3.75	< 2	10	< 0.5	< 2	0.08	1.0	151	85	1895	>15.00	10	< 1	0.09	< 10	1.62	320	10
N113401	205	226	< 0.2	4.46	< 2	510	< 0.5	< 2	4.27	2.0	38	150	233	6.96	10	< 1	0.07	< 10	3.87	1265	< 1
N113402	205	226	< 0.2	4.39	< 2	900	< 0.5	< 2	4.95	2.0	37	152	160	7.34	10	< 1	0.06	< 10	3.58	1310	< 1

CERTIFICATION: Stuart Bichler

* INTERFERENCE: Cu on Bi and P

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

Project : ICE-ID97-28
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Page Number : 1-B
Total Pages : 1
Certificate Date: 25-AUG-97
Invoice No. : I9738310
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9738310

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	Spec Gr S.G.
N113371	205	294	< 0.01	43	330	< 2	2	14	35	0.40	< 10	< 10	252	< 10	240	-----
N113372	205	294	< 0.01	46	280	< 2	< 2	21	24	0.33	< 10	< 10	234	< 10	660	-----
N113373	205	294	< 0.01	43	340	< 2	< 2	14	16	0.37	< 10	< 10	230	< 10	330	-----
N113374	205	294	< 0.01	42	Intf*	< 2	6	9	31	0.29	< 10	< 10	170	< 10	196	-----
N113375	205	294	< 0.01	46	240	< 2	< 2	11	17	0.31	< 10	< 10	199	< 10	230	-----
N113376	205	294	< 0.01	45	Intf*	< 2	4	10	22	0.27	< 10	< 10	179	< 10	206	-----
N113377	205	294	< 0.01	44	300	< 2	2	14	15	0.27	< 10	< 10	214	< 10	204	-----
N113378	205	294	< 0.01	44	310	< 2	2	17	17	0.16	< 10	< 10	230	< 10	276	-----
N113379	205	294	< 0.01	30	150	2	< 2	14	10	0.03	< 10	< 10	139	< 10	150	-----
N113380	205	294	< 0.01	30	120	6	< 2	13	3	0.03	< 10	< 10	123	< 10	340	-----
N113381	205	294	< 0.01	28	60	2	< 2	13	2	0.03	< 10	< 10	111	< 10	282	-----
N113382	205	294	< 0.01	18	80	2	< 2	7	3	0.05	< 10	< 10	79	< 10	258	-----
N113383	205	294	< 0.01	21	40	4	< 2	10	1	0.04	< 10	< 10	89	< 10	308	-----
N113384	205	294	< 0.01	26	30	12	< 2	12	1	0.04	< 10	< 10	105	< 10	98	-----
N113385	205	294	< 0.01	15	40	8	< 2	8	1	0.04	< 10	< 10	70	< 10	104	-----
N113386	205	226	< 0.01	26	60	8	< 2	14	1	0.02	< 10	< 10	106	< 10	132	-----
N113387	205	226	< 0.01	19	40	< 2	< 2	10	3	0.03	< 10	< 10	75	< 10	104	-----
N113388	205	226	< 0.01	18	10	12	< 2	9	1	0.03	< 10	< 10	71	< 10	2200	-----
N113389	205	226	< 0.01	34	80	4	< 2	16	2	< 0.01	< 10	< 10	154	< 10	1020	-----
N113390	205	226	< 0.01	25	50	12	< 2	14	2	0.01	< 10	< 10	127	< 10	1400	-----
N113391	205	226	< 0.01	29	40	12	< 2	16	2	< 0.01	< 10	< 10	141	< 10	582	-----
N113392	205	226	< 0.01	18	10	18	< 2	8	1	< 0.01	< 10	< 10	79	< 10	386	-----
N113393	205	226	< 0.01	25	40	20	< 2	13	1	< 0.01	< 10	< 10	124	< 10	556	-----
N113394	205	226	< 0.01	11	30	24	< 2	5	1	< 0.01	< 10	< 10	48	< 10	1085	-----
N113395	205	226	< 0.01	36	160	16	< 2	15	2	< 0.01	< 10	< 10	152	< 10	778	2.96
N113399	205	226	< 0.01	28	160	< 2	< 2	15	1	< 0.01	< 10	< 10	141	< 10	2630	3.15
N113400	205	226	< 0.01	27	170	12	< 2	13	1	< 0.01	< 10	< 10	129	< 10	108	-----
N113401	205	226	< 0.01	49	270	< 2	< 2	23	41	0.27	< 10	< 10	183	< 10	276	-----
N113402	205	226	< 0.01	50	310	< 2	< 2	27	46	0.31	< 10	< 10	199	< 10	102	-----

CERTIFICATION: Ian R. Bradley

* INTERFERENCE: Cu on Bi and P

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 : ICE-IC97-40
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Page Number : 1
Total Pages : 1
Certificate Date: 20-AUG-97
Invoice No. : I9738201
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9738201

SAMPLE	PREP CODE	Cu %
N113309	244 --	0.39
N113310	244 --	0.26
N113311	244 --	0.16
N113312	244 --	0.35

CERTIFICATION: Said Leonard

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

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

Project : ICE-IC97-39
Comments:

Certificate Date: 20-AUG-97
Invoice No. : 19738198
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9738198

SAMPLE	PREP CODE	Cu %
N113279	244 --	0.01
N113280	244 --	0.29
N113281	244 --	0.30
N113282	244 --	0.41
N113283	244 --	0.35
N113288	244 --	0.88
N113289	244 --	0.42
N113290	244 --	0.06
N113291	244 --	0.75

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.
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Project : ICE-IC97-36
Comments:

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Certificate Date: 18-AUG-97
Invoice No. : I9737810
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9737810

SAMPLE	PREP CODE	Cu %
N113221	244 --	0.24
N113222	244 --	0.44
N113223	244 --	0.25
N113224	244 --	0.47
N113225	244 --	0.42
N113226	244 --	0.51
N113227	244 --	0.15
N113228	244 --	0.27
N113229	244 --	0.27
N113230	244 --	0.23
N113231	244 --	0.45
N113232	244 --	0.12
N113241	244 --	0.28

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Project : ICE-IC97-37
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Invoice No. : I9737809
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Account : MPO

CERTIFICATE OF ANALYSIS A9737809

SAMPLE	PREP CODE	Cu %
N113243	244 --	0.31
N113244	244 --	0.27
N113245	244 --	0.36
N113246	244 --	0.45
N113247	244 --	0.40
N113248	244 --	0.08
N113249	244 --	0.43
N113250	244 --	0.46
N113251	244 --	0.32
N113252	244 --	0.38
N113253	244 --	0.42
N113254	244 --	0.37
N113255	244 --	0.48
N113256	244 --	0.26
N113257	244 --	0.78
N113258	244 --	0.54
N113262	244 --	0.23

CERTIFICATION: Said Leinad

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CERTIFICATE OF ANALYSIS A9737807

SAMPLE	PREP CODE	Cu %
N113198	244 --	0.65
N113199	244 --	0.15
N113200	244 --	0.17
N113201	244 --	0.24
N113202	244 --	0.50
N113203	244 --	0.70
N113204	244 --	0.86
N113216	244 --	0.57

CERTIFICATION: Said Leinad

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Project : ICE-IC97-39
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Certificate Date: 14-AUG-97
Invoice No. : I9737315
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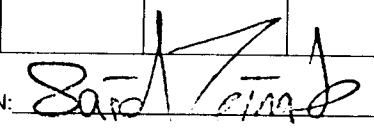
CERTIFICATE OF ANALYSIS A9737315

SAMPLE	PREP CODE	Cu %
N113284	244 --	1.89
N113285	244 --	2.32
N113286	244 --	1.49
N113287	244 --	1.42

CERTIFICATION: 

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Account : MPO

CERTIFICATE OF ANALYSIS A9737301

SAMPLE	PREP CODE		Cu %									
N113276	244	--	1.65									

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CERTIFICATE OF ANALYSIS A9737238

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113297	208	226	90	0.04	< 1	0.98	< 10	920	< 5	< 10	4.85	< 5	20	110	320	16.55	< 10	0.04	0.59	820	< 5
N113298	208	226	665	0.56	5	0.05	< 10	< 20	< 5	20	0.13	< 5	235	40	5150	>30.0	< 10	0.01	0.03	30	25
N113299	208	226	680	3.91	10	0.05	< 10	20	< 5	< 10	0.28	< 5	1005	20	38300	>30.0	< 10	0.01	0.03	50	30

CERTIFICATION: Stuart Bichler

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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	ZnSpec ppm	Gr S.G.
N113297	208	226	< 0.01	50	1800	10	< 10	< 5	110	0.06	20	< 20	360	< 20	440	3.11
N113298	208	226	< 0.01	15	< 100	65	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	1310	4.05
N113299	208	226	< 0.01	15	200	55	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	1085	4.00

CERTIFICATION: Ian Bradley

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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
N113294	205	226	< 0.2	2.93	6	80	< 0.5	< 2	2.12	< 0.5	26	27	81	5.20	10	< 1	0.05	< 10	2.02	905	< 1
N113295	205	226	< 0.2	2.98	6	80	< 0.5	< 2	2.43	< 0.5	27	26	100	5.27	10	< 1	0.04	< 10	2.01	910	< 1
N113296	205	226	< 0.2	3.02	< 2	70	< 0.5	< 2	2.61	< 0.5	29	32	103	5.57	10	< 1	0.06	< 10	2.13	1005	< 1
N113300	205	226	< 0.2	3.31	< 2	820	< 0.5	< 2	6.66	< 0.5	29	180	220	5.25	< 10	< 1	0.09	< 10	2.12	955	< 1
N113301	205	226	< 0.2	4.04	6	800	< 0.5	< 2	6.76	< 0.5	29	208	154	5.37	10	< 1	0.06	< 10	2.53	1035	< 1
N113302	205	226	< 0.2	2.74	< 2	100	< 0.5	< 2	3.82	< 0.5	31	79	68	5.20	10	< 1	0.03	< 10	2.32	860	< 1

CERTIFICATION: Hart Bichler

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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	Spec Gr S.G.
N113294	205	226	< 0.01	31	460	< 2	< 2	6	30	0.43	< 10	< 10	141	< 10	76	-----
N113295	205	226	< 0.01	30	440	< 2	< 2	5	24	0.41	< 10	< 10	142	< 10	74	-----
N113296	205	226	< 0.01	34	590	< 2	< 2	6	32	0.43	< 10	< 10	151	< 10	98	2.91
N113300	205	226	0.03	65	230	< 2	< 2	19	46	0.22	< 10	< 10	135	< 10	74	2.74
N113301	205	226	0.02	67	240	2	< 2	22	96	0.30	< 10	< 10	147	< 10	74	-----
N113302	205	226	0.03	43	300	< 2	< 2	12	34	0.33	< 10	< 10	154	< 10	74	-----

CERTIFICATION: David Chen

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Project : ICE-DDH-CHIP
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CERTIFICATE OF ANALYSIS A9736999

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
N112709	205 276	< 0.2	3.46	< 2	100	< 0.5	< 2	2.14	3.0	31	83	1740	5.71	< 10	< 1	0.06	< 10	2.46	765	< 1
N112710	205 276	< 0.2	3.55	< 2	80	< 0.5	< 2	2.86	5.0	39	70	1755	5.99	10	< 1	0.06	< 10	2.12	810	< 1
N112711	205 276	< 0.2	3.02	< 2	70	< 0.5	< 2	2.38	4.0	30	63	1220	5.70	< 10	< 1	0.06	< 10	1.92	795	< 1
N112712	205 276	< 0.2	3.68	< 2	130	< 0.5	< 2	2.92	9.0	34	63	2760	6.22	< 10	< 1	0.13	< 10	1.95	805	< 1

CERTIFICATION: Hart Bichler

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Project : ICE-DDH-CHIP
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Certificate Date: 17-AUG-97
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CERTIFICATE OF ANALYSIS A9736999

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
N112709	205	276	< 0.01	41	270	< 2	< 2	12	11	0.39	< 10	< 10	134	< 10	150
N112710	205	276	< 0.01	45	310	< 2	< 2	12	11	0.37	< 10	< 10	150	< 10	246
N112711	205	276	< 0.01	41	330	< 2	< 2	10	8	0.41	< 10	< 10	136	< 10	136
N112712	205	276	< 0.01	40	310	< 2	< 2	15	18	0.41	< 10	< 10	158	< 10	194

CERTIFICATION: Ivan Bridle

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CERTIFICATE OF ANALYSIS A9736998

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
N113219	205	226	< 0.2	1.55	< 2	3600	< 0.5	< 2	3.05	< 0.5	22	77	625	8.89	< 10	< 1	0.14	< 10	1.05	750	< 1

CERTIFICATION: Ian A Bichler

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CERTIFICATE OF ANALYSIS A9736998

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
N113219	205	226	0.06	36	2850	2	< 2	3	201	0.06	< 10	< 10	162	< 10	52

CERTIFICATION: [signature]

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CERTIFICATE OF ANALYSIS A9736997

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
N113342	205	226	< 0.2	2.29	< 2	780	< 0.5	< 2	2.21	< 0.5	16	117	70	3.65	< 10	< 1	0.06	< 10	1.79	770	< 1
N113343	205	226	0.2	0.76	2	520	< 0.5	< 2	0.09	< 0.5	12	60	85	1.97	< 10	< 1	0.18	10	0.21	415	< 1
N113344	205	226	0.2	0.90	2	500	< 0.5	< 2	0.15	< 0.5	12	50	68	2.47	< 10	< 1	0.16	10	0.30	800	< 1
N113345	205	226	< 0.2	0.93	< 2	450	< 0.5	< 2	0.06	< 0.5	10	70	85	1.93	< 10	< 1	0.13	10	0.38	435	< 1
N113346	205	226	< 0.2	1.11	2	610	< 0.5	< 2	0.07	< 0.5	10	46	62	2.35	< 10	< 1	0.18	10	0.40	715	< 1
N113347	205	226	0.2	1.20	8	570	< 0.5	< 2	0.08	< 0.5	13	45	84	2.64	< 10	< 1	0.17	10	0.49	580	1
N113348	205	226	< 0.2	0.77	4	470	< 0.5	< 2	0.07	< 0.5	9	54	70	1.74	< 10	< 1	0.13	10	0.27	435	< 1
N113349	205	226	< 0.2	0.64	8	460	< 0.5	< 2	0.05	< 0.5	6	61	61	1.48	< 10	< 1	0.14	10	0.16	195	< 1
N113350	205	226	< 0.2	0.79	< 2	390	< 0.5	< 2	0.05	< 0.5	6	50	69	1.35	< 10	1	0.14	10	0.29	210	< 1
N113351	205	226	< 0.2	0.93	2	360	< 0.5	< 2	0.06	< 0.5	6	75	59	1.78	< 10	< 1	0.12	< 10	0.40	290	< 1
N113352	205	226	< 0.2	0.70	4	410	< 0.5	< 2	0.04	< 0.5	8	92	57	1.58	< 10	< 1	0.12	< 10	0.24	465	< 1
N113353	205	226	0.2	0.60	8	500	< 0.5	< 2	0.08	< 0.5	11	82	85	2.08	< 10	< 1	0.14	10	0.09	840	1
N113354	205	226	0.2	0.64	8	380	< 0.5	< 2	0.08	< 0.5	6	85	68	1.53	< 10	< 1	0.08	< 10	0.32	360	1
N113355	205	226	0.2	0.48	8	410	< 0.5	< 2	0.04	< 0.5	5	101	65	1.40	< 10	< 1	0.09	< 10	0.09	545	1
N113356	205	226	< 0.2	1.54	< 2	570	< 0.5	< 2	0.20	< 0.5	17	67	80	3.93	< 10	< 1	0.14	< 10	0.63	1425	< 1
N113357	205	226	< 0.2	1.52	8	650	< 0.5	< 2	0.77	< 0.5	13	67	63	3.33	< 10	< 1	0.17	10	0.54	1225	< 1
N113358	205	226	< 0.2	1.46	< 2	790	< 0.5	< 2	0.64	< 0.5	13	45	66	3.96	< 10	< 1	0.24	10	0.47	1710	2
N113359	205	226	< 0.2	0.87	< 2	800	< 0.5	< 2	0.39	< 0.5	5	68	92	1.90	< 10	< 1	0.15	10	0.31	625	< 1
N113360	205	226	< 0.2	0.37	2	870	< 0.5	< 2	0.13	< 0.5	3	114	56	1.01	< 10	< 1	0.08	< 10	0.10	380	1
N113361	205	226	< 0.2	0.73	< 2	440	< 0.5	< 2	0.05	< 0.5	4	90	61	1.69	< 10	< 1	0.08	< 10	0.29	350	1
N113362	205	226	< 0.2	0.79	< 2	640	< 0.5	< 2	0.07	< 0.5	11	72	76	2.00	< 10	< 1	0.13	10	0.26	1080	< 1
N113363	205	226	0.2	1.12	< 2	620	< 0.5	< 2	0.07	< 0.5	4	82	66	2.12	< 10	< 1	0.16	10	0.42	230	1
N113364	205	226	< 0.2	1.00	4	650	< 0.5	< 2	0.05	< 0.5	4	80	71	2.05	< 10	< 1	0.16	10	0.35	220	< 1
N113365	205	226	0.2	0.86	4	730	< 0.5	< 2	0.06	< 0.5	5	89	68	1.88	< 10	< 1	0.16	10	0.28	270	< 1
N113366	205	226	< 0.2	0.83	2	620	< 0.5	< 2	0.05	< 0.5	6	90	70	1.90	< 10	< 1	0.15	10	0.26	255	< 1
N113367	205	226	< 0.2	0.23	12	350	< 0.5	< 2	0.04	< 0.5	3	82	44	0.97	< 10	< 1	0.07	< 10	0.04	230	2
N113368	205	226	0.2	0.25	6	380	< 0.5	< 2	0.37	< 0.5	3	68	57	1.23	< 10	< 1	0.08	< 10	0.16	320	1
N113369	205	226	< 0.2	0.41	< 2	280	< 0.5	< 2	0.03	< 0.5	5	80	66	0.94	< 10	< 1	0.07	< 10	0.18	185	< 1
N113370	205	226	0.2	0.28	2	520	< 0.5	< 2	0.37	< 0.5	6	86	72	1.43	< 10	< 1	0.08	< 10	0.15	455	1

CERTIFICATION: Stewart Borchers

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British Columbia, Canada V7J 2C1
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Invoice No. : I9736997
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736997

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
N113342	205	226	< 0.01	32	250	< 2	< 2	9	39	0.23	< 10	< 10	95	< 10	84
N113343	205	226	< 0.01	31	160	8	< 2	1	6	< 0.01	< 10	< 10	14	< 10	104
N113344	205	226	< 0.01	37	220	8	< 2	2	10	< 0.01	< 10	< 10	19	< 10	128
N113345	205	226	< 0.01	31	120	4	< 2	1	4	< 0.01	< 10	< 10	17	< 10	92
N113346	205	226	< 0.01	33	150	6	< 2	1	6	< 0.01	< 10	< 10	14	< 10	100
N113347	205	226	< 0.01	34	170	8	< 2	2	5	< 0.01	< 10	< 10	16	< 10	126
N113348	205	226	< 0.01	26	170	8	< 2	1	12	< 0.01	< 10	< 10	15	< 10	90
N113349	205	226	< 0.01	18	110	6	< 2	1	8	< 0.01	< 10	< 10	13	< 10	64
N113350	205	226	< 0.01	22	90	2	< 2	1	3	< 0.01	< 10	< 10	16	< 10	64
N113351	205	226	< 0.01	27	80	4	< 2	2	3	< 0.01	< 10	< 10	19	< 10	72
N113352	205	226	< 0.01	23	80	4	< 2	1	3	< 0.01	< 10	< 10	16	< 10	74
N113353	205	226	< 0.01	46	260	8	< 2	2	6	< 0.01	< 10	< 10	22	< 10	152
N113354	205	226	< 0.01	39	170	8	< 2	1	7	< 0.01	< 10	< 10	13	< 10	80
N113355	205	226	< 0.01	30	80	6	< 2	1	5	< 0.01	< 10	< 10	15	< 10	60
N113356	205	226	< 0.01	36	180	2	< 2	6	6	< 0.01	< 10	< 10	48	< 10	114
N113357	205	226	< 0.01	43	630	12	< 2	4	18	< 0.01	< 10	< 10	41	< 10	112
N113358	205	226	< 0.01	43	720	8	< 2	5	17	< 0.01	< 10	< 10	46	< 10	140
N113359	205	226	< 0.01	22	220	6	< 2	2	7	< 0.01	< 10	< 10	28	< 10	70
N113360	205	226	< 0.01	13	150	6	< 2	1	8	< 0.01	< 10	< 10	13	< 10	30
N113361	205	226	< 0.01	18	80	6	< 2	1	4	< 0.01	< 10	< 10	17	< 10	40
N113362	205	226	< 0.01	44	120	8	< 2	1	6	< 0.01	< 10	< 10	17	< 10	94
N113363	205	226	< 0.01	26	130	10	< 2	1	9	< 0.01	< 10	< 10	19	< 10	80
N113364	205	226	< 0.01	27	120	8	< 2	1	6	< 0.01	< 10	< 10	19	< 10	80
N113365	205	226	< 0.01	26	120	8	< 2	1	7	< 0.01	< 10	< 10	18	< 10	78
N113366	205	226	< 0.01	28	100	6	< 2	1	5	< 0.01	< 10	< 10	18	< 10	74
N113367	205	226	< 0.01	17	70	4	< 2	< 1	3	< 0.01	< 10	< 10	7	< 10	36
N113368	205	226	< 0.01	20	120	4	< 2	1	10	< 0.01	< 10	< 10	9	< 10	48
N113369	205	226	< 0.01	24	80	2	< 2	1	3	< 0.01	< 10	< 10	10	< 10	46
N113370	205	226	< 0.01	30	70	6	< 2	1	12	< 0.01	< 10	< 10	10	< 10	60

CERTIFICATION: [signature]

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 : ICE-IC97-35
Comments:

Certificate Date: 14-AUG-97
Invoice No. :19736958
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9736958

SAMPLE	PREP CODE	Cu %
N113205	244 --	1.15
N113215	244 --	1.46

CERTIFICATION: Said Teing

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

): EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-36
Comments:

Page er : 1
Total Pages : 1
Certificate Date: 14-AUG-97
Invoice No. : I9736957
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736957

SAMPLE	PREP CODE		Cu %
N113236	244	--	2.70
N113238	244	--	1.75
N113240	244	--	2.51

CERTIFICATION: Saad Ahmad

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

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Project : ICE-IC97-41
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 14-AUG-97
Invoice No. : 19736298
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736298

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113326	205	226	< 5	0.18	< 1	3.47	< 10	240	< 5	10	2.68	< 5	40	70	1820	6.79	10	0.17	2.34	900	< 5
N113327	205	226	< 5	0.30	< 1	3.48	< 10	340	< 5	< 10	2.80	< 5	55	80	2920	7.85	< 10	0.16	2.38	790	< 5
N113328	205	226	< 5	0.12	< 1	3.35	< 10	520	< 5	< 10	1.54	< 5	50	70	1160	6.40	< 10	0.41	3.03	1050	< 5
N113329	205	226	< 5	0.28	< 1	3.64	< 10	540	< 5	< 10	1.67	< 5	70	90	2870	8.89	< 10	0.37	3.21	1210	< 5
N113330	205	226	< 5	0.23	< 1	4.07	< 10	240	< 5	< 10	1.72	< 5	55	100	2280	9.27	< 10	0.33	3.95	1240	< 5
N113331	205	226	< 5	0.54	< 1	3.34	< 10	80	< 5	< 10	2.70	< 5	50	80	5520	6.86	< 10	0.05	2.40	790	< 5
N113332	205	226	< 5	0.38	< 1	3.68	< 10	60	< 5	< 10	2.26	< 5	45	110	3880	7.91	< 10	0.04	3.27	1080	< 5
N113333	205	226	< 5	0.99	< 1	1.62	< 10	40	< 5	10	1.71	< 5	20	100	10140	3.79	< 10	0.01	0.54	260	< 5
N113334	205	226	< 5	6.54	< 1	3.59	< 10	260	< 5	< 10	0.55	< 5	80	100	>50000	14.20	< 10	0.15	1.57	590	< 5

CERTIFICATION: Stewart Bradley

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Project : ICE-IC97-41
Comments:

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Certificate Date: 14-AUG-97
Invoice No. : I9736298
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Account : MPO

CERTIFICATE OF ANALYSIS A9736298

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
N113326	205	226	0.09	45	400	< 5	< 10	15	15	0.54	< 20	< 20	200	< 20	355
N113327	205	226	0.10	50	400	< 5	< 10	20	5	0.56	< 20	< 20	240	20	475
N113328	205	226	0.06	55	300	< 5	20	15	20	0.52	< 20	< 20	140	< 20	360
N113329	205	226	0.08	60	300	< 5	< 10	20	50	0.59	< 20	< 20	180	< 20	840
N113330	205	226	0.08	60	300	< 5	< 10	25	15	0.74	< 20	< 20	200	< 20	540
N113331	205	226	0.07	50	400	< 5	< 10	15	35	0.56	< 20	< 20	200	< 20	400
N113332	205	226	0.08	65	400	< 5	30	15	30	0.68	< 20	< 20	200	20	275
N113333	205	226	0.06	20	100	< 5	< 10	5	120	0.22	< 20	< 20	120	20	290
N113334	205	226	0.05	45	100	< 5	< 10	25	30	0.12	< 20	< 20	160	< 20	1655

CERTIFICATION: Ian R. Pardoe

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Project : ICE-IC97-41
Comments:

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Total Pages : 1
Certificate Date: 12-AUG-97
Invoice No. : I9736297
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736297

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
N113322	205	226	< 0.2	2.73	< 2	330	< 0.5	4	1.96	1.0	27	66	495	5.08	10	< 1	0.10	< 10	1.92	665	< 1
N113323	205	226	< 0.2	3.04	< 2	640	< 0.5	8	2.57	< 0.5	32	68	683	4.95	20	< 1	0.05	< 10	1.98	680	< 1
N113324	205	226	< 0.2	3.40	< 2	810	< 0.5	< 2	2.91	< 0.5	32	62	493	5.02	20	< 1	0.04	< 10	2.12	760	< 1
N113325	205	226	< 0.2	3.21	< 2	1000	< 0.5	< 2	2.51	< 0.5	32	68	475	4.92	20	< 1	0.04	< 10	2.21	775	< 1
N113335	205	226	< 0.2	3.40	< 2	70	< 0.5	2	2.14	3.0	44	56	575	6.40	20	< 1	0.04	< 10	2.40	850	< 1
N113336	205	226	< 0.2	3.71	< 2	100	< 0.5	< 2	3.24	< 0.5	39	40	92	6.04	20	< 1	0.03	< 10	2.06	880	< 1
N113337	205	226	< 0.2	2.84	< 2	290	< 0.5	< 2	1.77	< 0.5	34	65	228	5.06	10	< 1	0.04	< 10	2.46	835	< 1

CERTIFICATION: Stuart Bichler

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British Columbia, Canada V7J 2C1
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Project : ICE-IC97-41
Comments:

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Certificate Date: 12-AUG-97
Invoice No. : I9736297
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736297

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
N113322	205	226	0.02	32	380	< 2	< 2	6	15	0.39	< 10	< 10	116	< 10	176
N113323	205	226	0.03	35	300	< 2	< 2	7	11	0.34	< 10	< 10	125	< 10	202
N113324	205	226	0.03	37	290	< 2	< 2	6	15	0.32	< 10	< 10	129	< 10	136
N113325	205	226	0.03	39	300	< 2	< 2	6	13	0.30	< 10	< 10	125	< 10	128
N113335	205	226	0.03	34	370	< 2	< 2	12	11	0.42	< 10	< 10	153	< 10	668
N113336	205	226	0.03	29	370	< 2	< 2	8	9	0.35	< 10	< 10	132	< 10	206
N113337	205	226	0.03	43	250	< 2	< 2	5	12	0.32	< 10	< 10	99	< 10	108

CERTIFICATION: David Beckler

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British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : ICE-IC97-40
Comments:

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Total Pages :1
Certificate Date: 14-AUG-97
Invoice No. :19736294
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9736294

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113313	205	226	< 5	0.49	< 1	4.04	< 10	160	< 5	< 10	2.22	< 5	30	110	4850	6.02	< 10	0.18	2.36	820	< 5
N113314	205	226	< 5	3.40	< 1	4.40	< 10	140	< 5	< 10	0.99	< 5	35	100	33500	8.39	< 10	0.17	1.73	400	< 5
N113315	205	226	< 5	1.55	< 1	6.14	30	80	< 5	< 10	1.06	< 5	40	170	15650	8.76	< 10	0.22	3.06	730	< 5
N113316	205	226	< 5	1.80	< 1	4.62	< 10	80	< 5	30	0.41	< 5	30	150	18100	6.89	< 10	0.07	1.89	390	< 5
N113317	205	226	< 5	2.09	< 1	5.70	< 10	160	< 5	< 10	0.24	< 5	45	150	20600	9.39	10	0.06	3.68	780	< 5
N113318	205	226	< 5	3.64	< 1	5.18	10	300	< 5	< 10	0.41	< 5	45	110	37200	9.00	< 10	0.05	2.36	430	< 5
N113319	205	226	< 5	2.05	< 1	4.15	< 10	80	< 5	40	1.43	< 5	50	90	21600	8.35	< 10	0.12	2.36	680	< 5

CERTIFICATION: Ian Bichler

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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-40
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 14-AUG-97
Invoice No. : I9736294
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736294

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
N113313	205	226	0.08	45	300	< 5	< 10	25	35	0.58	< 20	< 20	200	< 20	120
N113314	205	226	0.06	40	300	< 5	< 10	30	5	0.23	< 20	< 20	240	< 20	205
N113315	205	226	0.07	60	300	< 5	< 10	45	5	0.37	20	< 20	300	20	200
N113316	205	226	0.06	40	500	< 5	10	45	30	0.07	< 20	< 20	240	< 20	195
N113317	205	226	0.07	60	< 100	< 5	< 10	35	5	0.12	< 20	< 20	320	20	205
N113318	205	226	0.07	50	400	< 5	20	35	25	0.09	< 20	< 20	320	< 20	265
N113319	205	226	0.04	45	300	< 5	< 10	30	60	0.50	< 20	< 20	220	< 20	615

CERTIFICATION: Ian Bradley

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

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Y1A 3S9

Project : ICE-IC97-40
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 14-AUG-97
Invoice No. : 19736290
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736290

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
N113303	205	226	< 0.2	2.96	< 2	740	< 0.5	< 2	1.60	3.0	28	57	471	5.35	10	< 1	0.13	< 10	1.92	760	< 1
N113304	205	226	< 0.2	2.76	< 2	170	< 0.5	< 2	1.80	3.0	26	51	415	5.31	< 10	< 1	0.09	< 10	1.64	705	< 1
N113305	205	226	< 0.2	3.16	< 2	240	< 0.5	< 2	1.65	4.0	23	59	823	5.74	10	< 1	0.11	< 10	1.50	620	< 1
N113306	205	226	< 0.2	3.21	< 2	140	< 0.5	< 2	2.59	3.5	25	46	480	5.48	10	< 1	0.05	< 10	1.49	710	< 1
N113307	205	226	< 0.2	3.99	< 2	80	< 0.5	< 2	3.69	4.0	24	55	635	5.13	10	< 1	0.04	< 10	1.45	635	< 1
N113308	205	226	< 0.2	3.62	< 2	90	< 0.5	< 2	2.61	3.5	29	43	887	5.75	10	< 1	0.04	< 10	1.87	855	< 1
N113309	205	226	< 0.2	3.86	< 2	160	< 0.5	< 2	1.79	3.5	43	82	3890	6.48	10	< 1	0.02	< 10	2.28	905	< 1
N113310	205	226	< 0.2	3.04	< 2	100	< 0.5	< 2	1.52	3.0	26	124	2260	4.49	< 10	< 1	0.10	< 10	1.89	645	< 1
N113311	205	226	< 0.2	2.96	< 2	70	< 0.5	< 2	1.93	3.5	25	54	1435	4.71	10	< 1	0.04	< 10	1.73	620	< 1
N113312	205	226	< 0.2	3.62	< 2	110	< 0.5	< 2	1.56	3.5	31	92	3350	5.33	10	< 1	0.06	< 10	2.13	715	< 1
N113320	205	226	< 0.2	3.43	< 2	70	< 0.5	< 2	1.71	6.0	45	61	628	6.11	10	< 1	0.07	< 10	2.47	925	< 1
N113321	205	226	< 0.2	3.92	< 2	70	< 0.5	< 2	1.93	4.0	40	73	360	6.40	10	< 1	0.04	< 10	2.98	965	< 1

CERTIFICATION: Stewart Bradshaw

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

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

Project : ICE-IC97-40
Comments:

Certificate Date: 14-AUG-97
Invoice No. :I9736290
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9736290

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
N113303	205	226	0.02	43	200	< 2	< 2	11	13	0.26	< 10	< 10	90	< 10	102
N113304	205	226	0.03	30	230	2	< 2	11	8	0.30	< 10	< 10	100	< 10	132
N113305	205	226	0.03	26	200	< 2	< 2	20	9	0.19	< 10	< 10	104	< 10	100
N113306	205	226	0.04	29	240	< 2	< 2	13	8	0.25	< 10	< 10	110	< 10	92
N113307	205	226	0.02	25	220	< 2	< 2	19	10	0.28	< 10	< 10	141	< 10	80
N113308	205	226	0.01	30	280	< 2	< 2	15	9	0.35	< 10	< 10	140	< 10	100
N113309	205	226	0.01	37	290	< 2	< 2	23	14	0.33	< 10	< 10	137	< 10	152
N113310	205	226	0.03	43	180	2	< 2	16	21	0.22	< 10	< 10	97	< 10	72
N113311	205	226	0.01	34	240	< 2	< 2	12	22	0.26	< 10	< 10	101	< 10	74
N113312	205	226	0.02	41	220	< 2	< 2	18	10	0.26	< 10	< 10	119	< 10	94
N113320	205	226	0.01	34	290	< 2	< 2	11	8	0.33	< 10	< 10	127	< 10	506
N113321	205	226	< 0.01	45	290	2	< 2	10	10	0.37	< 10	< 10	124	< 10	214

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

Project : ICE-IC97-38
Comments:

Certificate Date: 14-AUG-97
Invoice No. :19736285
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9736285

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113265	205	294	35	0.64	< 1	0.75	< 10	20	< 5	10	0.04	< 5	750	140	6530	29.8	< 10	0.31	0.24	10	25
N113266	205	294	40	0.95	< 1	1.33	< 10	20	< 5	10	0.05	< 5	720	100	9770	28.7	< 10	0.27	0.72	30	10
N113267	205	294	20	0.54	< 1	1.73	10	20	< 5	< 10	0.05	< 5	580	110	5520	27.4	< 10	0.31	1.43	30	10
N113268	205	294	20	2.22	< 1	5.03	20	20	< 5	< 10	0.09	< 5	405	140	22000	24.9	< 10	0.18	3.98	160	< 5
N113269	205	294	15	2.14	< 1	4.11	< 10	20	< 5	< 10	0.08	< 5	265	100	20900	21.5	< 10	0.12	3.18	130	< 5
N113270	205	294	10	1.38	< 1	6.51	40	20	< 5	10	0.11	< 5	130	120	13640	19.80	< 10	0.05	4.25	260	< 5
N113271	205	294	30	1.30	< 1	6.08	< 10	20	< 5	< 10	0.15	< 5	140	120	12410	19.35	< 10	0.09	3.98	250	< 5
N113272	205	294	30	1.05	< 1	5.06	< 10	20	< 5	< 10	0.14	< 5	310	100	10260	29.2	< 10	0.10	3.55	180	< 5
N113273	205	294	10	0.19	< 1	1.67	< 10	20	< 5	< 10	0.05	< 5	405	90	1845	26.6	< 10	0.38	1.09	40	5
N113274	205	294	20	0.34	< 1	1.66	< 10	60	< 5	< 10	0.06	< 5	570	60	3200	27.9	< 10	0.33	1.13	50	< 5
N113275	205	294	25	0.52	< 1	3.12	< 10	20	< 5	10	0.09	< 5	350	80	5040	24.3	< 10	0.16	2.95	110	< 5

CERTIFICATION: Stuart Bichler

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.
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Project : ICE-IC97-38
Comments:

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Certificate Date: 14-AUG-97
Invoice No. : 19736285
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736285

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
N113265	205	294	0.04	30	< 100	< 5	< 10	< 5	5	0.01	< 20	< 20	40	< 20	50
N113266	205	294	0.04	30	< 100	< 5	< 10	5	< 5	< 0.01	< 20	< 20	60	< 20	90
N113267	205	294	0.03	35	< 100	5	< 10	5	< 5	< 0.01	< 20	< 20	60	< 20	35
N113268	205	294	0.03	55	< 100	< 5	< 10	20	5	0.01	< 20	< 20	260	20	100
N113269	205	294	0.03	35	< 100	< 5	10	15	15	0.01	< 20	< 20	220	< 20	85
N113270	205	294	0.03	55	100	< 5	< 10	25	45	0.11	20	< 20	320	< 20	145
N113271	205	294	0.03	45	100	5	10	25	15	0.11	< 20	< 20	300	20	130
N113272	205	294	0.03	40	100	< 5	< 10	20	20	0.02	< 20	< 20	280	< 20	155
N113273	205	294	0.04	25	< 100	< 5	< 10	5	5	0.01	< 20	< 20	60	20	65
N113274	205	294	0.03	30	< 100	< 5	< 10	5	5	0.01	20	< 20	60	< 20	65
N113275	205	294	0.02	35	< 100	< 5	50	15	< 5	0.01	< 20	< 20	100	< 20	155

CERTIFICATION: Ian Bridden

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British Columbia, Canada V7J 2C1
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Project : ICE-IC97-38
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Certificate Date: 14-AUG-97
Invoice No. : 19736275
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9736275

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
N113263	205	294	< 0.2	2.65	< 2	120	< 0.5	< 2	1.96	4.0	28	52	609	5.39	10	< 1	0.03	< 10	1.62	575	< 1
N113264	205	294	1.2	0.77	18	80	< 0.5	2	0.36	2.0	10	46	816	>15.00	10	< 1	0.27	< 10	0.26	100	22
N113276	205	294	0.4	4.65	< 2	80	< 0.5	Intf*	0.38	10.0	138	138	>10000	13.70	10	< 1	0.06	< 10	2.93	1140	< 1
N113277	205	294	< 0.2	3.42	< 2	120	< 0.5	< 2	2.79	5.5	118	59	1130	8.96	10	< 1	< 0.01	< 10	2.22	1210	< 1
N113278	205	294	< 0.2	3.98	< 2	50	< 0.5	< 2	3.76	2.5	44	63	265	6.82	10	< 1	< 0.01	< 10	2.76	980	< 1

CERTIFICATION: Stewart Bichler

*INTERFERENCE: Cu on Bi and P

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

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

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Certificate Date: 14-AUG-97
Invoice No. : 19736275
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9736275

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
N113263	205	294	0.02	31	320	< 2	< 2	9	9	0.27	< 10	< 10	127	< 10	396
N113264	205	294	0.28	2	240	38	2	4	28	0.04	< 10	< 10	107	< 10	128
N113276	205	294	0.01	44	Intf*	< 2	4	20	11	< 0.01	< 10	< 10	149	< 10	3590
N113277	205	294	< 0.01	41	420	< 2	< 2	20	13	0.37	< 10	< 10	193	< 10	1525
N113278	205	294	< 0.01	37	450	< 2	< 2	19	16	0.42	< 10	< 10	197	< 10	176

CERTIFICATION: Ian Bradley

* INTERFERENCE: Cu on Bi and P

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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-IC97-42
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Certificate Date: 14-AUG-97
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Account : MPO

CERTIFICATE OF ANALYSIS A9736220

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
N113338	205	226	< 0.2	2.81	< 2	330	< 0.5	< 2	1.90	3.0	28	74	367	4.95	10	< 1	0.07	< 10	2.01	815	< 1
N113339	205	226	< 0.2	3.48	< 2	190	< 0.5	< 2	3.37	1.5	32	61	361	5.33	10	< 1	< 0.01	< 10	1.83	805	< 1
N113340	205	226	< 0.2	2.52	< 2	90	< 0.5	< 2	2.04	1.5	35	71	773	5.06	10	< 1	0.01	< 10	1.94	835	< 1
N113341	205	226	< 0.2	3.42	< 2	610	< 0.5	< 2	3.59	1.5	26	61	123	4.86	10	< 1	0.01	< 10	1.88	820	< 1

CERTIFICATION: Ian Bichler

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

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CERTIFICATE OF ANALYSIS A9736220

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
N113338	205	226	< 0.01	36	350	< 2	< 2	9	34	0.33	< 10	< 10	125	< 10	222
N113339	205	226	0.02	35	350	< 2	< 2	10	12	0.29	< 10	< 10	137	< 10	140
N113340	205	226	0.02	39	300	< 2	< 2	9	14	0.27	< 10	< 10	114	< 10	170
N113341	205	226	0.03	32	290	< 2	< 2	10	17	0.21	< 10	< 10	126	< 10	76

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

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Project : ICE-IC97-39
Comments:

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Invoice No. : I9736211
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9736211

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
N113279	205	226	< 0.2	3.14	6	660	< 0.5	< 2	2.18	2.0	28	44	91	4.40	10	< 1	< 0.01	< 10	1.45	560	< 1
N113280	205	226	2.2	0.54	32	180	< 0.5	8	0.05	1.5	11	111	2690	>15.00	20	< 1	0.05	< 10	0.08	40	27
N113281	205	226	2.6	0.55	80	190	< 0.5	4	0.05	2.5	9	100	2830	>15.00	30	< 1	0.04	< 10	0.10	35	37
N113282	205	226	1.2	0.69	262	150	< 0.5	10	0.05	1.5	10	177	3790	>15.00	40	< 1	0.03	< 10	0.11	45	109
N113283	205	226	0.6	3.09	68	130	< 0.5	< 2	0.71	3.0	27	111	3300	10.20	20	< 1	0.11	< 10	1.07	240	19
N113284	205	226	2.2	4.29	< 2	10	< 0.5	Intf*	0.14	3.5	78	99	>10000	>15.00	20	< 1	0.06	< 10	2.00	395	7
N113285	205	226	1.6	4.75	< 2	10	< 0.5	Intf*	0.13	3.5	79	99	>10000	>15.00	20	< 1	0.11	< 10	1.80	440	8
N113286	205	226	0.8	3.64	< 2	100	< 0.5	Intf*	0.20	3.0	30	94	>10000	13.30	10	< 1	0.08	< 10	1.21	235	4
N113287	205	226	< 0.2	3.86	< 2	80	< 0.5	Intf*	0.24	4.0	40	103	>10000	11.10	10	< 1	0.13	< 10	1.68	370	< 1
N113288	205	226	< 0.2	3.57	< 2	480	< 0.5	< 2	0.39	12.0	130	110	8330	10.10	10	< 1	0.11	< 10	2.11	1160	< 1
N113289	205	226	< 0.2	3.16	< 2	140	< 0.5	< 2	0.78	23.5	202	125	4160	12.25	10	< 1	0.16	< 10	1.75	1950	< 1
N113290	205	226	< 0.2	2.94	< 2	530	< 0.5	< 2	0.88	2.5	202	133	636	11.45	10	< 1	0.14	< 10	1.62	1780	< 1
N113291	205	226	< 0.2	2.76	< 2	260	< 0.5	< 2	0.82	16.0	216	94	6990	13.30	10	< 1	0.10	< 10	1.33	1780	< 1
N113292	205	226	< 0.2	3.28	< 2	60	< 0.5	< 2	1.89	11.0	41	54	857	5.56	10	< 1	< 0.01	< 10	2.16	805	< 1
N113293	205	226	< 0.2	3.13	< 2	130	< 0.5	< 2	1.88	10.0	57	63	353	6.45	10	< 1	< 0.01	< 10	2.28	910	< 1

CERTIFICATION: Ian Bichler

* INTERFERNCE: Cu on Bi and P

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

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

Project : ICE-IC97-39
Comments:

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Total Pages : 1
Certificate Date: 14-AUG-97
Invoice No. : I9736211
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9736211

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
N113279	205	226	0.03	39	640	24	< 2	8	91	0.49	< 10	< 10	125	< 10	118
N113280	205	226	< 0.01	< 1	250	80	4	3	5	0.03	< 10	< 10	141	< 10	144
N113281	205	226	< 0.01	< 1	320	90	8	3	6	0.04	< 10	< 10	192	< 10	198
N113282	205	226	< 0.01	< 1	760	56	2	5	4	0.05	< 10	< 10	386	< 10	298
N113283	205	226	< 0.01	16	420	18	< 2	22	8	0.20	< 10	< 10	245	< 10	246
N113284	205	226	< 0.01	32	Intf*	16	2	18	4	< 0.01	< 10	< 10	170	< 10	862
N113285	205	226	< 0.01	35	Intf*	2	< 2	25	4	< 0.01	< 10	< 10	175	< 10	734
N113286	205	226	< 0.01	20	Intf*	6	< 2	30	5	< 0.01	< 10	< 10	138	< 10	656
N113287	205	226	< 0.01	31	Intf*	4	< 2	22	6	< 0.01	< 10	< 10	121	< 10	1035
N113288	205	226	0.01	49	240	4	< 2	22	5	< 0.01	< 10	< 10	135	< 10	3600
N113289	205	226	0.01	57	240	4	< 2	19	7	0.01	< 10	< 10	122	< 10	3890
N113290	205	226	0.01	59	230	2	< 2	18	10	< 0.01	< 10	< 10	97	< 10	2840
N113291	205	226	0.01	47	270	< 2	< 2	19	13	< 0.01	< 10	< 10	114	< 10	3160
N113292	205	226	< 0.01	32	310	< 2	< 2	10	7	0.33	< 10	< 10	139	< 10	326
N113293	205	226	< 0.01	33	300	< 2	< 2	13	16	0.36	< 10	< 10	136	< 10	838

CERTIFICATION: _____

* INTERFERNCE: Cu on Bi and P

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PHONE: 604-984-0221 FAX: 604-984-0218

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Y1A 3S9

Project : ICE ID97-20
Comments:

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Total s :1
Certificate Date: 08-AUG-97
Invoice No. : 19736072
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9736072

SAMPLE	PREP CODE		Cu %									
N113180	244	--	1.19									

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

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Y1A 3S9

Project : ICE-IC97-35
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CERTIFICATE OF ANALYSIS A9735899

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113206	208	226	25	0.72	1	2.34	< 10	20	< 5	< 10	0.12	< 5	275	120	6610	19.90	< 10	< 0.01	1.40	110	5
N113207	208	226	30	0.69	1	1.07	10	< 20	< 5	< 10	0.07	< 5	780	100	6510	27.8	< 10	0.02	0.49	40	10
N113208	208	226	20	0.51	< 1	6.42	< 10	< 20	< 5	< 10	0.09	< 5	165	210	4810	16.90	< 10	0.02	4.66	320	< 5
N113209	208	226	15	1.07	1	5.12	< 10	< 20	< 5	< 10	0.05	< 5	80	170	9780	13.10	< 10	0.03	3.36	210	< 5
N113210	208	226	< 5	1.34	< 1	6.24	< 10	< 20	< 5	< 10	0.04	< 5	120	210	11950	14.70	< 10	0.04	3.99	260	< 5
N113211	208	226	5	1.86	< 1	4.79	< 10	180	< 5	< 10	0.05	< 5	150	120	16810	13.35	< 10	0.02	2.52	170	< 5
N113212	208	226	50	3.17	< 1	1.98	10	60	< 5	< 10	0.05	< 5	900	80	29900	>30.0	< 10	0.02	0.98	40	10
N113213	208	226	5	1.83	< 1	5.15	< 10	520	< 5	< 10	0.30	< 5	80	60	17210	8.39	< 10	0.18	1.39	390	< 5
N113214	208	226	10	1.13	< 1	6.43	< 10	140	< 5	< 10	0.62	< 5	45	120	10620	9.34	< 10	0.08	3.89	900	< 5

CERTIFICATION: Ian Bachler

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

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CERTIFICATE OF ANALYSIS A9735899

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
N113206	208	226	< 0.01	25	100	< 5	< 10	10	5	0.03	20	20	120	< 20	345
N113207	208	226	< 0.01	20	100	< 5	< 10	5	5	< 0.01	< 20	60	60	< 20	265
N113208	208	226	< 0.01	55	100	10	< 10	25	< 5	0.08	< 20	< 20	260	< 20	245
N113209	208	226	< 0.01	40	100	< 5	< 10	20	10	0.04	< 20	< 20	180	< 20	200
N113210	208	226	0.01	55	100	10	< 10	20	5	0.03	20	< 20	240	< 20	235
N113211	208	226	< 0.01	35	200	< 5	< 10	15	< 5	0.01	< 20	< 20	200	< 20	220
N113212	208	226	< 0.01	30	100	< 5	< 10	5	< 5	< 0.01	< 20	< 20	60	< 20	275
N113213	208	226	< 0.01	15	200	< 5	< 10	25	15	0.07	20	< 20	200	< 20	375
N113214	208	226	< 0.01	40	400	< 5	< 10	45	70	0.38	< 20	< 20	240	< 20	600

CERTIFICATION: [signature]

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Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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Y1A 3S9

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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9735880

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
N113196	205	226	< 0.2	2.06	< 2	520	< 0.5	< 2	1.22	< 0.5	24	45	261	>15.00	< 10	< 1	0.06	< 10	1.25	540	6
N113197	205	226	0.2	3.37	4	540	< 0.5	< 2	2.18	0.5	27	58	764	5.65	< 10	< 1	0.08	< 10	2.07	730	1
N113198	205	226	0.4	2.75	4	500	< 0.5	22	1.45	1.0	23	58	6280	4.89	< 10	< 1	0.09	< 10	1.46	570	1
N113199	205	226	0.2	2.87	< 2	320	< 0.5	< 2	1.43	1.0	23	65	1315	6.03	< 10	< 1	0.08	< 10	1.70	565	< 1
N113200	205	226	1.0	2.10	4	440	< 0.5	2	0.88	0.5	21	75	1520	8.00	< 10	< 1	0.07	< 10	1.13	350	4
N113201	205	226	0.8	2.56	12	490	< 0.5	6	1.07	1.5	17	79	2160	8.56	10	< 1	0.06	< 10	1.11	400	4
N113202	205	226	1.2	2.74	28	340	< 0.5	22	0.87	2.0	36	100	4890	11.45	20	< 1	0.06	< 10	1.19	560	15
N113203	205	226	2.2	2.95	58	200	< 0.5	34	0.44	2.0	26	154	6820	>15.00	10	< 1	0.08	< 10	0.93	305	54
N113204	205	226	< 0.2	2.62	12	10	< 0.5	48	0.20	1.0	277	75	8570	>15.00	< 10	< 1	< 0.01	< 10	1.59	230	5
N113205	205	226	0.2	1.25	22	< 10	< 0.5	Intf*	0.10	0.5	267	76	>10000	>15.00	< 10	< 1	0.01	< 10	0.58	80	8
N113215	205	226	0.4	7.20	< 2	140	< 0.5	Intf*	0.53	2.5	30	142	>10000	6.37	10	< 1	0.04	< 10	3.10	610	1
N113216	205	226	0.2	4.82	< 2	50	< 0.5	22	1.99	7.5	35	95	5420	5.89	10	< 1	0.09	< 10	3.12	625	< 1
N113217	205	226	0.2	4.01	4	30	< 0.5	< 2	2.06	18.5	39	47	229	5.90	10	< 1	0.04	< 10	3.13	690	1
N113218	205	226	0.2	4.53	< 2	30	< 0.5	6	1.97	18.0	63	105	2190	7.74	10	< 1	0.04	< 10	3.61	840	< 1

CERTIFICATION: Ian Bichler

* INTERFERENCES: Cu on Bi and P

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
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Y1A 3S9

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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
N113196	205	226	0.04	29	350	< 2	2	5	22	0.27	< 10	< 10	112	40	118
N113197	205	226	0.06	41	530	< 2	< 2	9	30	0.46	< 10	< 10	154	< 10	166
N113198	205	226	0.05	36	590	6	< 2	9	28	0.25	< 10	< 10	149	< 10	208
N113199	205	226	0.04	35	410	< 2	< 2	9	16	0.31	< 10	< 10	131	< 10	176
N113200	205	226	0.04	26	470	8	< 2	12	18	0.21	< 10	< 10	132	< 10	210
N113201	205	226	0.04	26	490	8	< 2	19	22	0.28	< 10	< 10	182	< 10	190
N113202	205	226	0.05	25	610	10	2	21	31	0.25	< 10	< 10	257	< 10	240
N113203	205	226	0.06	22	470	46	< 2	21	15	0.13	< 10	< 10	258	< 10	370
N113204	205	226	0.03	24	200	10	< 2	13	3	0.06	< 10	< 10	112	< 10	314
N113205	205	226	0.03	16	Intf*	10	2	7	3	0.04	< 10	< 10	91	< 10	302
N113215	205	226	0.05	36	Intf*	< 2	< 2	46	14	0.14	< 10	< 10	209	< 10	360
N113216	205	226	0.07	39	220	< 2	< 2	24	9	0.22	< 10	< 10	165	< 10	552
N113217	205	226	0.05	32	320	< 2	< 2	10	6	0.40	< 10	< 10	159	< 10	512
N113218	205	226	0.05	45	290	< 2	< 2	20	8	0.37	< 10	< 10	183	< 10	1740

CERTIFICATION: Ivan Bebbington

* INTERFERENCES: Cu on Bi and P

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

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

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CERTIFICATE OF ANALYSIS A9735855

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N113233	205	294	15	0.63	0.2	2.80	18	10	< 0.5	28	0.05	< 0.5	292	192	6060	>15.00	70	< 1	0.08	< 10	0.66
N113234	205	294	20	2.38	< 0.2	3.53	32	10	< 0.5	Intf*	0.05	< 0.5	316	220	>10000	>15.00	40	< 1	0.06	< 10	1.37
N113235	205	294	30	3.01	0.8	5.37	14	20	< 0.5	Intf*	0.05	< 0.5	144	202	>10000	>15.00	10	< 1	0.04	< 10	2.37
N113237	205	294	50	3.20	0.6	3.10	< 2	10	< 0.5	Intf*	0.01	< 0.5	379	105	>10000	>15.00	< 10	< 1	0.01	< 10	1.48
N113239	205	294	20	2.23	0.6	3.48	< 2	< 10	< 0.5	Intf*	0.05	< 0.5	309	137	>10000	>15.00	< 10	< 1	0.05	< 10	2.14

CERTIFICATION: Stuart Buchler

* INTERFERENCE: HIGH Cu on Bi and P

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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

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CERTIFICATE OF ANALYSIS A9735855

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113233	205	294	95	12	0.02	16	190	74	< 2	12	19	0.01	< 10	< 10	150	< 10	166
N113234	205	294	100	12	0.04	27	Intf*	132	< 2	12	34	0.01	< 10	< 10	175	< 10	94
N113235	205	294	160	12	0.04	30	Intf*	10	< 2	19	21	< 0.01	< 10	< 10	322	< 10	190
N113237	205	294	145	7	0.04	23	Intf*	< 2	< 2	11	11	0.01	< 10	< 10	142	< 10	124
N113239	205	294	245	2	0.03	35	Intf*	< 2	< 2	15	5	< 0.01	< 10	< 10	142	< 10	216

CERTIFICATION:

*INTERFERENCE: HIGH Cu on Bi and P

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

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

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CERTIFICATE OF ANALYSIS A9735854

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
N113243	205	226	< 0.2	4.46	< 2	230	< 0.5	4	0.80	4.5	27	97	2620	10.05	20	< 1	0.03	< 10	3.85	780	< 1
N113244	205	226	< 0.2	4.28	< 2	350	< 0.5	< 2	0.44	3.0	29	102	2470	10.55	20	< 1	0.01	< 10	3.54	705	< 1
N113245	205	226	< 0.2	5.31	< 2	180	< 0.5	< 2	0.41	2.0	24	105	3240	13.40	30	< 1	< 0.01	< 10	3.42	570	< 1
N113246	205	226	0.4	4.66	< 2	90	< 0.5	< 2	0.45	1.5	25	83	3970	13.30	30	< 1	0.01	< 10	2.15	335	< 1
N113247	205	226	0.8	4.15	< 2	70	< 0.5	2	0.28	2.0	21	98	3760	11.40	20	< 1	0.01	< 10	2.38	495	< 1
N113248	205	226	< 0.2	0.91	< 2	60	< 0.5	< 2	0.11	< 0.5	5	114	820	3.40	< 10	< 1	< 0.01	< 10	0.49	120	< 1
N113249	205	226	< 0.2	5.11	< 2	1110	< 0.5	< 2	0.43	1.0	25	64	3910	11.50	20	< 1	0.03	< 10	2.98	550	< 1
N113250	205	226	< 0.2	4.41	< 2	70	< 0.5	< 2	0.43	0.5	92	132	4170	>15.00	30	< 1	0.06	< 10	2.52	265	< 1
N113251	205	226	< 0.2	5.47	< 2	40	< 0.5	< 2	0.21	< 0.5	125	131	2870	13.90	30	< 1	0.07	< 10	3.62	355	< 1
N113252	205	226	< 0.2	3.67	< 2	10	< 0.5	< 2	0.19	< 0.5	247	101	3470	>15.00	20	< 1	0.07	< 10	2.14	205	< 1
N113253	205	226	< 0.2	4.29	< 2	< 10	< 0.5	< 2	0.10	< 0.5	262	110	3810	>15.00	20	< 1	0.07	< 10	3.09	255	< 1
N113254	205	226	< 0.2	4.16	< 2	< 10	< 0.5	< 2	0.09	0.5	265	110	3330	14.55	20	< 1	0.07	< 10	2.96	235	< 1
N113255	205	226	< 0.2	4.45	< 2	10	< 0.5	< 2	0.08	2.0	234	111	4300	12.90	20	< 1	0.05	< 10	3.59	300	< 1
N113256	205	226	< 0.2	5.31	< 2	160	< 0.5	< 2	0.10	1.0	32	95	2340	9.84	30	< 1	0.04	< 10	4.86	575	< 1
N113257	205	226	< 0.2	5.42	< 2	70	< 0.5	< 2	0.12	0.5	40	103	7550	13.45	30	< 1	0.04	< 10	3.54	845	< 1
N113258	205	226	< 0.2	3.39	< 2	150	< 0.5	< 2	0.75	13.0	189	136	5000	9.71	20	< 1	0.10	< 10	3.96	1390	< 1
N113259	205	226	< 0.2	3.75	< 2	40	< 0.5	< 2	1.78	< 0.5	38	98	298	5.90	20	< 1	0.08	< 10	4.05	510	< 1
N113260	205	226	< 0.2	3.83	< 2	180	< 0.5	6	3.72	< 0.5	34	74	188	6.18	20	< 1	0.05	< 10	3.64	795	< 1
N113261	205	226	< 0.2	3.09	< 2	150	< 0.5	2	2.65	< 0.5	41	128	87	5.11	10	< 1	0.05	< 10	3.61	775	< 1
N113262	205	226	< 0.2	4.07	< 2	210	< 0.5	2	1.56	5.5	32	69	2060	7.36	20	< 1	0.04	< 10	3.46	660	< 1

CERTIFICATION: Stuart Buchler

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

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

Project : ICE-IC97-37
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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
N113243	205	226	0.01	32	190	< 2	< 2	26	11	0.29	< 10	< 10	180	< 10	784
N113244	205	226	0.01	28	130	< 2	< 2	25	11	0.16	< 10	< 10	153	< 10	672
N113245	205	226	< 0.01	32	180	< 2	< 2	23	6	0.10	< 10	< 10	192	< 10	712
N113246	205	226	< 0.01	21	270	2	< 2	18	20	0.03	< 10	< 10	174	< 10	762
N113247	205	226	< 0.01	26	150	4	< 2	14	31	0.09	< 10	< 10	149	< 10	1280
N113248	205	226	< 0.01	6	50	< 2	< 2	3	12	0.01	< 10	< 10	53	< 10	196
N113249	205	226	< 0.01	20	290	2	< 2	25	36	0.09	< 10	< 10	182	< 10	696
N113250	205	226	< 0.01	27	90	< 2	< 2	19	7	0.01	< 10	< 10	174	< 10	308
N113251	205	226	< 0.01	37	60	< 2	< 2	20	2	< 0.01	< 10	< 10	176	< 10	352
N113252	205	226	< 0.01	29	130	< 2	< 2	14	< 1	< 0.01	< 10	< 10	123	< 10	268
N113253	205	226	< 0.01	33	100	< 2	< 2	15	< 1	< 0.01	< 10	< 10	113	< 10	292
N113254	205	226	< 0.01	32	70	< 2	< 2	14	< 1	< 0.01	< 10	< 10	120	< 10	348
N113255	205	226	< 0.01	32	60	< 2	< 2	15	< 1	< 0.01	< 10	< 10	130	< 10	440
N113256	205	226	0.01	27	90	2	< 2	19	3	0.01	< 10	< 10	196	< 10	712
N113257	205	226	0.01	35	190	< 2	< 2	21	3	0.03	< 10	< 10	196	< 10	732
N113258	205	226	0.01	58	340	< 2	< 2	28	14	0.16	< 10	< 10	171	10	3910
N113259	205	226	0.01	47	320	< 2	< 2	28	34	0.40	< 10	< 10	185	< 10	162
N113260	205	226	0.01	37	310	< 2	< 2	24	31	0.36	< 10	< 10	188	< 10	168
N113261	205	226	0.01	40	270	< 2	< 2	22	28	0.35	< 10	< 10	148	< 10	150
N113262	205	226	0.01	32	240	< 2	< 2	21	15	0.29	< 10	< 10	157	< 10	768

CERTIFICATION: Stewart Hamilton

Chemex Labs Ltd.

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

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Y1A 3S9

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CERTIFICATE OF ANALYSIS A9735853

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
N113220	205	294	< 0.2	2.75	< 2	340	< 0.5	< 2	2.21	0.5	25	57	487	5.50	10	< 1	0.04	< 10	1.81	845	< 1
N113221	205	294	< 0.2	2.79	< 2	80	< 0.5	2	2.06	3.0	36	74	2150	8.31	20	< 1	0.01	< 10	1.43	580	< 1
N113222	205	294	< 0.2	2.49	4	80	< 0.5	4	1.18	3.0	48	107	3920	12.40	10	< 1	0.03	< 10	1.31	510	< 1
N113223	205	294	< 0.2	3.32	< 2	100	< 0.5	2	2.56	3.5	35	67	2320	8.27	30	< 1	0.03	< 10	1.52	660	< 1
N113224	205	294	< 0.2	4.00	2	150	< 0.5	2	1.81	3.0	76	91	4300	12.00	30	< 1	0.14	< 10	1.54	735	< 1
N113225	205	294	< 0.2	5.53	< 2	460	< 0.5	< 2	0.80	2.5	76	211	4000	11.70	20	< 1	0.07	< 10	2.44	750	< 1
N113226	205	294	< 0.2	4.89	< 2	860	< 0.5	< 2	0.42	2.0	82	187	4560	14.40	10	< 1	0.04	< 10	1.93	710	< 1
N113227	205	294	< 0.2	4.22	< 2	90	< 0.5	< 2	2.29	4.0	35	143	1365	6.71	20	< 1	0.04	< 10	2.16	780	< 1
N113228	205	294	< 0.2	3.84	< 2	160	< 0.5	< 2	1.60	5.0	42	154	2400	8.16	20	< 1	0.05	< 10	2.34	815	< 1
N113229	205	294	< 0.2	5.22	< 2	90	< 0.5	< 2	0.87	1.5	45	170	2380	9.38	20	< 1	0.03	< 10	2.87	905	< 1
N113230	205	294	< 0.2	7.06	< 2	160	< 0.5	< 2	0.14	< 0.5	31	187	2080	8.67	20	< 1	0.04	< 10	2.51	525	< 1
N113231	205	294	< 0.2	2.73	86	20	< 0.5	8	0.06	< 0.5	168	205	4290	>15.00	30	< 1	0.03	< 10	0.55	70	63
N113232	205	294	< 0.2	6.65	10	320	< 0.5	< 2	0.06	< 0.5	23	105	1065	5.85	30	< 1	0.05	< 10	1.03	175	11
N113236	205	294	< 0.2	7.56	2	< 10	< 0.5	Intf*	0.04	< 0.5	111	166	>10000	>15.00	40	< 1	0.01	< 10	5.26	400	< 1
N113238	205	294	< 0.2	7.49	< 2	< 10	< 0.5	Intf*	0.05	< 0.5	44	202	>10000	12.90	30	< 1	< 0.01	< 10	7.00	740	< 1
N113240	205	294	< 0.2	4.65	< 2	120	< 0.5	Intf*	0.59	11.0	73	109	>10000	9.36	20	< 1	0.04	< 10	3.20	635	< 1
N113241	205	294	< 0.2	3.91	< 2	80	< 0.5	< 2	1.91	20.5	103	137	2610	8.56	20	< 1	0.01	< 10	3.70	985	< 1
N113242	205	294	< 0.2	3.62	< 2	110	< 0.5	2	2.13	3.5	38	107	489	5.27	20	< 1	0.06	< 10	3.29	630	< 1

CERTIFICATION: Ian Bridden

* INTERFERENCES: Cu on Bi and P

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

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CERTIFICATE OF ANALYSIS A9735853

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
N113220	205	294	0.01	30	380	< 2	< 2	10	25	0.31	< 10	< 10	134	< 10	186
N113221	205	294	0.03	33	290	< 2	< 2	19	11	0.28	< 10	< 10	171	< 10	436
N113222	205	294	0.02	27	350	< 2	< 2	25	10	0.23	< 10	< 10	204	< 10	996
N113223	205	294	0.02	33	290	< 2	< 2	18	11	0.30	< 10	< 10	177	< 10	340
N113224	205	294	0.01	42	290	< 2	< 2	25	36	0.15	< 10	< 10	182	< 10	1335
N113225	205	294	0.01	50	160	< 2	< 2	27	9	0.09	< 10	< 10	130	< 10	1390
N113226	205	294	0.01	49	140	< 2	< 2	28	11	0.08	< 10	< 10	136	10	2120
N113227	205	294	0.04	51	180	< 2	< 2	21	8	0.17	< 10	< 10	110	< 10	456
N113228	205	294	0.03	41	200	< 2	< 2	25	7	0.18	< 10	< 10	142	< 10	750
N113229	205	294	0.01	42	230	< 2	< 2	33	4	0.15	< 10	< 10	159	< 10	808
N113230	205	294	0.01	36	170	2	< 2	28	5	0.06	< 10	< 10	175	< 10	376
N113231	205	294	< 0.01	11	410	28	< 2	17	2	< 0.01	< 10	< 10	329	< 10	410
N113232	205	294	0.01	6	200	10	< 2	20	6	0.04	< 10	< 10	216	< 10	220
N113236	205	294	< 0.01	41	Intf*	< 2	< 2	26	5	0.01	< 10	< 10	364	< 10	140
N113238	205	294	< 0.01	52	Intf*	< 2	< 2	28	< 1	0.01	< 10	< 10	220	< 10	396
N113240	205	294	< 0.01	36	Intf*	< 2	< 2	29	5	0.16	< 10	< 10	184	10	1810
N113241	205	294	0.01	40	210	< 2	< 2	21	6	0.24	< 10	< 10	160	10	3480
N113242	205	294	0.03	37	220	< 2	< 2	12	9	0.28	< 10	< 10	130	< 10	498

CERTIFICATION: Ian Ruddock

*INTERFERENCES: Cu on Bi and P

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 : ICE ID97-22
Comments:

Page er : 1-A
Total s : 1
Certificate Date: 06-AUG-97
Invoice No. : 19734559
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9734559

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N113187	208	226	-----	-----	< 0.2	3.00	2	70	< 0.5	< 2	2.21	1.5	27	19	59	6.37	10	< 1	< 0.01	< 10	1.92
N113188	208	226	-----	-----	< 0.2	2.77	< 2	200	< 0.5	< 2	1.76	1.5	27	23	70	6.48	10	< 1	< 0.01	< 10	1.94
N113189	208	226	-----	-----	< 0.2	3.03	2	270	< 0.5	< 2	2.72	1.5	49	64	605	6.76	10	< 1	< 0.01	< 10	2.33
N113190	208	226	380	1.12	3.6	0.20	18	< 10	< 0.5	< 2	0.42	3.0	757	68	9080	>15.00	10	< 1	< 0.01	< 10	0.11
N113191	208	226	420	0.97	4.8	0.14	20	< 10	< 0.5	< 2	0.96	3.5	547	24	7770	>15.00	10	< 1	< 0.01	< 10	0.09
N113192	208	226	370	0.40	3.2	0.46	22	< 10	< 0.5	< 2	4.61	3.5	498	36	3300	>15.00	10	< 1	< 0.01	< 10	0.30
N113193	208	226	-----	-----	< 0.2	3.54	< 2	130	< 0.5	< 2	2.32	0.5	29	135	213	4.86	10	< 1	0.06	< 10	3.01
N113194	208	226	-----	-----	< 0.2	4.18	10	90	< 0.5	< 2	3.35	0.5	35	120	262	4.63	10	< 1	0.06	< 10	2.48
N113195	208	226	-----	-----	< 0.2	3.74	< 2	60	< 0.5	< 2	2.74	0.5	24	113	107	3.91	10	< 1	0.07	< 10	2.71

CERTIFICATION: Stuart Bichler

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

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WHITEHORSE, YT
Y1A 3S9

Project : ICE ID97-22
Comments:

Certificate Date: 06-AUG-97
Invoice No. : I9734559
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9734559

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Spec Gr S.G.
N113187	208	226	1020	< 1	< 0.01	19	550	< 2	< 2	13	20	0.53	< 10	< 10	217	< 10	102	-----
N113188	208	226	1095	< 1	< 0.01	19	560	< 2	< 2	14	19	0.43	< 10	< 10	206	< 10	106	-----
N113189	208	226	1335	< 1	< 0.01	38	430	< 2	< 2	16	31	0.37	< 10	< 10	182	< 10	128	-----
N113190	208	226	105	28	< 0.01	7	70	30	2	< 1	3	0.02	< 10	< 10	60	< 10	364	3.82
N113191	208	226	95	22	< 0.01	6	80	18	< 2	< 1	4	< 0.01	< 10	< 10	37	< 10	580	4.03
N113192	208	226	230	23	< 0.01	8	180	30	2	< 1	10	0.01	< 10	< 10	71	< 10	468	3.83
N113193	208	226	675	< 1	0.02	46	230	< 2	4	13	32	0.22	< 10	< 10	126	< 10	116	-----
N113194	208	226	650	< 1	0.02	46	190	< 2	4	10	25	0.20	< 10	< 10	119	< 10	90	-----
N113195	208	226	665	< 1	0.02	45	220	< 2	< 2	11	24	0.23	< 10	< 10	106	< 10	70	-----

CERTIFICATION: David Bickler

Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : ICE ID97-20
Comments:

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Certificate Date: 06-AUG-97
Invoice No. : I9734558
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9734558

SAMPLE	PREP CODE		Au ppb FA+AA	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
N113163	205	294	-----	< 0.2	2.97	< 2	100	< 0.5	< 2	1.99	1.0	24	22	75	4.96	10	< 1	0.07	< 10	1.57	760
N113164	205	294	-----	< 0.2	3.46	6	20	< 0.5	< 2	2.75	1.0	25	22	73	5.37	10	< 1	< 0.01	< 10	1.68	860
N113165	205	294	-----	< 0.2	3.25	2	30	< 0.5	< 2	2.17	1.0	34	26	324	5.89	10	< 1	< 0.01	< 10	2.07	1010
N113166	205	294	835	21.0	0.04	16	< 10	< 0.5	Intf*	0.08	5.5	636	23	>10000	>15.00	10	1	< 0.01	< 10	0.01	50
N113167	205	294	460	6.6	0.06	22	< 10	< 0.5	Intf*	0.07	5.0	412	28	>10000	>15.00	10	< 1	0.01	< 10	0.02	40
N113168	205	294	1165	31.2	0.01	16	< 10	< 0.5	Intf*	0.05	8.0	685	29	>10000	>15.00	< 10	< 1	< 0.01	< 10	< 0.01	20
N113169	205	294	990	25.8	0.01	24	< 10	< 0.5	Intf*	0.05	7.5	275	25	>10000	>15.00	< 10	< 1	< 0.01	< 10	< 0.01	35
N113170	205	294	725	18.2	0.01	28	< 10	< 0.5	Intf*	0.16	6.0	69	60	>10000	>15.00	< 10	1	< 0.01	< 10	< 0.01	55
N113171	205	294	305	1.4	0.41	16	10	< 0.5	< 2	8.40	3.0	53	37	4200	>15.00	10	< 1	< 0.01	< 10	0.24	260
N113172	205	294	-----	< 0.2	3.73	6	30	< 0.5	< 2	3.43	0.5	19	97	457	5.78	10	< 1	0.02	< 10	2.07	610
N113173	205	294	-----	< 0.2	4.01	6	40	< 0.5	< 2	3.04	0.5	18	110	419	6.11	10	< 1	0.04	< 10	2.15	650
N113174	205	294	-----	< 0.2	4.04	6	50	< 0.5	< 2	2.93	0.5	21	124	301	5.26	10	< 1	0.05	< 10	2.34	665
N113175	205	294	-----	< 0.2	2.98	< 2	30	< 0.5	< 2	1.72	0.5	27	63	113	4.46	10	< 1	0.07	< 10	2.27	1025
N113176	205	294	-----	< 0.2	2.87	< 2	20	< 0.5	< 2	1.55	0.5	26	74	93	4.93	10	< 1	0.03	< 10	2.45	960
N113177	205	294	-----	< 0.2	3.58	< 2	40	< 0.5	< 2	2.33	1.0	36	87	98	6.02	10	< 1	0.03	< 10	2.70	1040
N113178	205	294	-----	0.2	5.25	2	50	< 0.5	< 2	0.59	2.0	90	106	73	>15.00	30	< 1	< 0.01	< 10	3.74	380
N113179	205	294	-----	0.8	4.30	12	20	< 0.5	< 2	0.15	1.5	258	86	4560	>15.00	20	< 1	< 0.01	< 10	2.70	285
N113180	205	294	-----	2.2	3.20	< 2	< 10	< 0.5	Intf*	0.16	2.5	463	62	>10000	>15.00	10	< 1	< 0.01	< 10	1.95	240
N113181	205	294	-----	1.2	4.09	18	10	< 0.5	< 2	0.58	2.0	140	81	8480	14.30	10	< 1	< 0.01	< 10	2.82	315
N113182	205	294	-----	0.6	4.74	18	30	< 0.5	< 2	0.33	1.0	55	123	1510	9.92	10	< 1	< 0.01	< 10	3.96	915
N113183	205	294	-----	0.4	4.88	< 2	110	< 0.5	< 2	0.60	3.0	62	136	811	9.19	10	< 1	0.03	< 10	4.22	1150
N113184	205	294	-----	< 0.2	3.60	10	150	< 0.5	< 2	1.40	1.0	35	68	407	5.79	10	< 1	0.04	< 10	3.31	950
N113185	205	294	-----	< 0.2	3.28	6	100	< 0.5	< 2	1.58	0.5	28	46	89	4.68	10	< 1	0.11	< 10	2.84	870
N113186	205	294	-----	< 0.2	3.13	8	40	< 0.5	< 2	2.25	1.0	31	58	155	5.52	10	< 1	< 0.01	< 10	2.83	925

CERTIFICATION: Ian Bichler

* INTERFERENCE: Cu on Bi and P

Chemex Labs Ltd.

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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 : ICE ID97-20
Comments:

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Invoice No. : I9734558
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9734558

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N113163	205	294	< 1	< 0.01	25	430	< 2	< 2	6	21	0.44	< 10	< 10	148	< 10	82	-----	-----
N113164	205	294	< 1	< 0.01	26	440	< 2	< 2	6	15	0.45	< 10	< 10	160	< 10	84	-----	-----
N113165	205	294	< 1	< 0.01	27	430	< 2	< 2	9	15	0.43	< 10	< 10	165	< 10	94	-----	2.98
N113166	205	294	16	< 0.01	5	Intf*	6	6	< 1	< 1	< 0.01	< 10	< 10	7	< 10	672	3.12	4.22
N113167	205	294	1	< 0.01	8	Intf*	38	8	< 1	2	< 0.01	< 10	< 10	107	< 10	926	4.57	4.03
N113168	205	294	17	< 0.01	< 1	Intf*	< 2	8	< 1	< 1	< 0.01	< 10	< 10	3	< 10	532	7.23	4.25
N113169	205	294	9	< 0.01	3	Intf*	8	6	< 1	< 1	< 0.01	< 10	< 10	3	< 10	1165	4.95	4.06
N113170	205	294	14	< 0.01	< 1	Intf*	18	6	< 1	< 1	< 0.01	< 10	< 10	3	< 10	1100	3.41	4.14
N113171	205	294	6	< 0.01	11	480	28	4	< 1	34	0.01	< 10	< 10	129	< 10	720	0.51	3.72
N113172	205	294	< 1	0.03	41	290	< 2	< 2	6	19	0.19	< 10	< 10	118	< 10	150	-----	2.94
N113173	205	294	< 1	0.02	44	320	< 2	< 2	9	25	0.18	< 10	< 10	129	< 10	142	-----	-----
N113174	205	294	< 1	0.01	45	270	< 2	4	9	23	0.19	< 10	< 10	109	< 10	114	-----	-----
N113175	205	294	< 1	< 0.01	41	260	< 2	< 2	6	15	0.24	< 10	< 10	94	< 10	78	-----	-----
N113176	205	294	< 1	0.01	32	260	< 2	< 2	6	14	0.31	< 10	< 10	105	< 10	82	-----	-----
N113177	205	294	< 1	< 0.01	43	240	< 2	2	10	18	0.32	< 10	< 10	129	< 10	96	-----	-----
N113178	205	294	1	< 0.01	32	230	6	2	24	16	0.16	< 10	< 10	182	< 10	466	-----	-----
N113179	205	294	2	< 0.01	24	110	< 2	< 2	19	5	0.13	< 10	< 10	160	< 10	168	-----	-----
N113180	205	294	21	< 0.01	20	Intf*	< 2	2	14	3	0.07	< 10	< 10	107	< 10	74	-----	-----
N113181	205	294	3	< 0.01	25	130	< 2	< 2	18	4	0.06	< 10	< 10	131	< 10	166	-----	-----
N113182	205	294	< 1	< 0.01	38	290	< 2	< 2	22	5	0.18	< 10	< 10	198	< 10	314	-----	-----
N113183	205	294	3	< 0.01	41	250	2	< 2	25	10	0.33	< 10	< 10	196	< 10	574	-----	-----
N113184	205	294	< 1	< 0.01	35	390	< 2	2	13	33	0.33	< 10	< 10	126	< 10	112	-----	-----
N113185	205	294	< 1	< 0.01	32	370	< 2	< 2	7	16	0.30	< 10	< 10	101	< 10	96	-----	-----
N113186	205	294	< 1	< 0.01	34	390	< 2	2	12	24	0.33	< 10	< 10	152	< 10	88	-----	-----

CERTIFICATION: Ian Pirie

*INTERFERENCE: Cu on Bi and P

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

Project : ICE: ID97-16
Comments:

Page Number : 1
Total Pages : 1
Certificate Date: 28-JUL-97
Invoice No. : I9734073
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9734073

SAMPLE	PREP CODE		Au ppb FA+AA
N113106	244	--	440

CERTIFICATION: Frank Vonk

Chemex Labs Ltd.

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

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Project : ICE-ID97-11
Comments:

Certificate Date: 30-JUL-97
Invoice No. : I9733886
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9733886

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %								
N112926	244	--	145	0.37								
N112927	244	--	95	0.86								
N112928	244	--	115	0.65								
N112929	244	--	140	0.80								
N112930	244	--	135	0.51								
N112931	244	--	65	0.41								
N112932	244	--	110	0.24								
N112948	244	--	10	0.18								
N112949	244	--	10	0.83								
N112950	244	--	10	0.58								
N112951	244	--	10	0.25								
N112952	244	--	20	0.55								

CERTIFICATION: Sara Cathro

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

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Project : ICE-ID97-O8
Comments:

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Total F. : 1
Certificate Date: 29-JUL-97
Invoice No. : I9733885
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9733885

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N112892	244 --	115	0.47

CERTIFICATION: Said Leinad

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Project : ICE-ID97-06
Comments:

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Total P. s : 1
Certificate Date: 29-JUL-97
Invoice No. : I9733884
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9733884

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %								
N112803	244	--	135	0.47								

CERTIFICATION:

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Project : ICE: ID97-16
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Invoice No. : I9733779
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9733779

SAMPLE	PREP CODE		Cu %									
N113106	244	--	1.35									

CERTIFICATION: Said Leung

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Y1A 3S9

Project : ICE-ID97-18
Comments:

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Invoice No. : I9733765
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9733765

SAMPLE	PREP CODE	Cu %
N113111	244 --	2.71

CERTIFICATION:

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Y1A 3S9

Project : FP-ID97-14
Comments:

Certificate Date: 25-JUL-97
Invoice No. :19732359
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9732359

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N113066	208	294	300	0.24	13	0.06	50	80	< 5	< 10	1.11	10	70	100	2100	12.25	< 10	< 0.01	0.06	230	< 5
N113067	208	294	480	0.59	22	0.12	60	580	< 5	< 10	0.26	40	270	90	5270	23.4	< 10	0.01	0.08	60	25
N113068	208	294	90	0.36	3	1.60	< 10	1980	< 5	< 10	2.16	< 5	55	110	3090	26.9	< 10	0.09	1.01	300	5
N113069	208	294	355	2.82	8	0.06	< 10	140	< 5	< 10	0.50	5	420	60	25600	>30.0	< 10	0.01	0.04	60	20
N113070	208	294	505	2.68	16	0.03	< 10	< 20	< 5	< 10	0.60	10	840	50	24900	>30.0	< 10	0.01	0.01	40	35
N113071	208	294	340	1.86	10	0.26	30	< 20	< 5	< 10	4.87	5	760	60	16610	26.7	< 10	0.01	0.20	170	25

CERTIFICATION: Ian Bradley

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Account : MPO

CERTIFICATE OF ANALYSIS A9732359

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	Spec Gr S.G.
N113066	208	294	< 0.01	20	< 100	175	< 10	< 5	5	< 0.01	< 20	< 20	60	< 20	1980	2.98
N113067	208	294	< 0.01	20	700	240	< 10	< 5	15	< 0.01	< 20	< 20	20	< 20	16040	3.39
N113068	208	294	0.03	30	3700	35	< 10	5	70	0.05	< 20	< 20	480	< 20	820	3.21
N113069	208	294	< 0.01	15	100	45	30	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	945	4.13
N113070	208	294	< 0.01	10	< 100	40	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	795	4.29
N113071	208	294	0.01	15	< 100	55	< 10	< 5	5	< 0.01	< 20	< 20	120	< 20	465	3.66

CERTIFICATION: Ian Bradley

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British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : FP-ID97-14
Comments:

Certificate Date: 27-JUL-97
Invoice No. : 19732358
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9732358

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Spec Gr S.G.	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
N113063	205	294	-----	-----	-----	< 0.2	2.57	10	60	< 0.5	2	1.82	< 0.5	29	22	91	6.90	10	< 1	0.04	< 10
N113064	205	294	-----	-----	-----	0.2	3.11	< 2	50	< 0.5	< 2	2.30	< 0.5	36	29	149	8.23	10	1	0.03	< 10
N113065	205	294	-----	-----	2.84	0.4	3.79	< 2	50	< 0.5	< 2	2.66	< 0.5	35	51	107	8.74	10	2	0.01	< 10
N113072	205	294	-----	-----	2.84	< 0.2	3.07	< 2	40	< 0.5	< 2	2.61	< 0.5	23	120	323	5.23	10	< 1	0.11	< 10
N113073	205	294	< 5	0.04	-----	< 0.2	2.80	< 2	30	< 0.5	< 2	2.20	< 0.5	21	80	324	3.91	< 10	< 1	0.08	< 10
N113074	205	294	< 5	0.03	-----	< 0.2	3.01	< 2	70	< 0.5	< 2	2.19	< 0.5	21	109	298	4.48	< 10	< 1	0.08	< 10
N113075	205	294	< 5	0.01	-----	< 0.2	3.71	< 2	70	< 0.5	< 2	2.91	< 0.5	27	51	87	5.53	10	< 1	0.07	< 10
N113076	205	294	< 5	0.01	-----	< 0.2	3.33	< 2	40	< 0.5	< 2	2.64	< 0.5	25	51	77	5.47	10	1	0.04	< 10
N113077	205	294	< 5	0.01	-----	< 0.2	4.16	< 2	50	< 0.5	< 2	3.32	< 0.5	32	53	71	6.22	10	< 1	0.03	< 10
N113078	205	294	5	0.45	-----	1.2	4.54	< 2	100	< 0.5	12	1.95	< 0.5	82	107	4060	9.95	10	2	< 0.01	< 10
N113079	205	294	< 5	0.12	-----	0.8	3.77	< 2	20	< 0.5	< 2	0.38	< 0.5	101	107	1120	11.95	< 10	< 1	< 0.01	< 10
N113080	205	294	5	0.03	-----	0.2	4.89	< 2	< 10	< 0.5	< 2	0.23	< 0.5	97	153	281	11.15	10	< 1	< 0.01	< 10
N113081	205	294	10	0.05	-----	0.6	5.72	< 2	< 10	< 0.5	< 2	0.29	< 0.5	88	196	405	10.65	10	< 1	< 0.01	< 10
N113082	205	294	10	0.36	-----	1.2	5.18	< 2	< 10	< 0.5	2	0.19	< 0.5	131	140	3080	11.10	10	< 1	< 0.01	< 10
N113083	205	294	< 5	0.07	-----	0.4	5.26	< 2	< 10	< 0.5	< 2	0.39	< 0.5	114	117	648	13.00	10	< 1	< 0.01	< 10
N113084	205	294	5	0.06	-----	0.2	3.02	< 2	30	< 0.5	6	0.27	< 0.5	99	64	477	>15.00	< 10	< 1	< 0.01	< 10
N113085	205	294	< 5	0.02	-----	0.2	2.63	< 2	< 10	< 0.5	< 2	0.35	< 0.5	106	68	207	12.85	< 10	< 1	< 0.01	< 10
N113086	205	294	< 5	0.03	-----	0.2	5.11	< 2	< 10	< 0.5	2	0.75	< 0.5	130	107	315	13.25	10	1	< 0.01	< 10
N113087	205	294	< 5	0.06	-----	0.4	5.64	< 2	< 10	< 0.5	2	0.24	< 0.5	141	92	587	>15.00	10	< 1	< 0.01	< 10
N113088	205	294	25	0.14	-----	0.6	4.49	< 2	< 10	< 0.5	< 2	0.81	0.5	213	80	1280	13.85	10	1	< 0.01	< 10
N113089	205	294	10	0.12	-----	0.2	4.68	< 2	< 10	< 0.5	< 2	0.40	< 0.5	240	79	1130	14.25	10	1	< 0.01	< 10
N113090	205	294	15	0.05	-----	0.6	5.11	2	< 10	< 0.5	2	0.20	0.5	288	130	482	>15.00	10	3	< 0.01	< 10
N113091	205	294	35	0.04	-----	0.8	4.37	< 2	< 10	< 0.5	2	0.15	3.0	188	91	350	>15.00	10	< 1	< 0.01	< 10
N113092	205	294	20	0.21	-----	1.0	4.94	4	< 10	< 0.5	< 2	0.26	0.5	132	100	1920	11.75	10	1	< 0.01	< 10
N113093	205	294	10	0.15	-----	1.0	4.12	< 2	< 10	< 0.5	< 2	0.25	1.5	108	101	1350	10.75	10	< 1	< 0.01	< 10
N113094	205	294	50	0.21	-----	1.8	3.59	6	< 10	< 0.5	2	0.15	6.5	117	78	1985	11.05	10	< 1	< 0.01	< 10
N113095	205	294	< 5	0.01	-----	< 0.2	3.91	< 2	70	< 0.5	< 2	2.78	< 0.5	33	71	110	6.00	10	< 1	0.01	< 10
N113096	205	294	< 5	0.01	-----	< 0.2	3.20	< 2	40	< 0.5	< 2	2.26	< 0.5	28	65	89	4.84	< 10	1	0.06	< 10
N113097	205	294	< 5	0.01	-----	< 0.2	2.98	< 2	40	< 0.5	< 2	1.98	< 0.5	27	59	91	4.73	< 10	< 1	0.07	< 10
N113098	205	294	< 5	0.05	-----	< 0.2	5.44	< 2	< 10	< 0.5	< 2	0.49	1.5	99	86	483	10.25	10	1	< 0.01	< 10

CERTIFICATION: Hart Bichler

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Y1A 3S9

Project : FP-ID97-14
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Certificate Date: 27-JUL-97
Invoice No. : 19732358
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9732358

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N113063	205	294	1.80	995	< 1	0.01	25	620	< 2	< 2	8	17	0.51	< 10	< 10	185	< 10	98
N113064	205	294	2.06	1235	< 1	0.01	30	740	< 2	< 2	9	20	0.65	< 10	< 10	232	< 10	114
N113065	205	294	2.57	1415	< 1	0.01	34	640	< 2	2	24	26	0.27	< 10	< 10	279	< 10	224
N113072	205	294	2.11	790	< 1	0.03	47	270	< 2	< 2	11	36	0.16	< 10	< 10	128	< 10	140
N113073	205	294	1.82	545	< 1	0.03	44	180	< 2	2	4	27	0.15	< 10	< 10	78	< 10	120
N113074	205	294	2.24	680	< 1	0.03	50	220	< 2	< 2	6	52	0.19	< 10	< 10	90	< 10	124
N113075	205	294	2.31	950	< 1	0.01	34	300	< 2	< 2	8	16	0.29	< 10	< 10	137	< 10	80
N113076	205	294	2.07	785	< 1	0.02	31	340	< 2	2	8	17	0.27	< 10	< 10	141	< 10	72
N113077	205	294	2.62	800	< 1	0.01	34	350	< 2	< 2	13	17	0.26	< 10	< 10	167	< 10	82
N113078	205	294	4.05	565	3	< 0.01	32	150	2	4	17	12	0.06	< 10	< 10	145	< 10	260
N113079	205	294	2.31	215	1	< 0.01	31	110	6	2	14	1	0.04	< 10	< 10	122	< 10	94
N113080	205	294	3.91	235	1	< 0.01	43	160	< 2	2	17	4	0.05	< 10	< 10	155	< 10	54
N113081	205	294	4.87	305	2	< 0.01	58	250	< 2	6	21	5	0.08	< 10	< 10	187	< 10	792
N113082	205	294	4.46	230	2	< 0.01	48	200	2	2	18	1	0.05	< 10	< 10	159	< 10	120
N113083	205	294	4.71	255	9	< 0.01	41	220	< 2	< 2	19	4	0.01	< 10	< 10	184	< 10	34
N113084	205	294	2.32	155	7	< 0.01	23	60	2	< 2	11	7	0.01	< 10	< 10	126	< 10	30
N113085	205	294	1.92	135	4	< 0.01	21	40	2	6	10	2	0.03	< 10	< 10	101	< 10	20
N113086	205	294	4.06	245	1	< 0.01	36	140	2	2	20	6	0.04	< 10	< 10	165	< 10	58
N113087	205	294	4.42	250	6	< 0.01	35	150	< 2	< 2	22	5	0.01	< 10	< 10	181	< 10	92
N113088	205	294	3.54	235	17	< 0.01	30	130	10	8	18	6	< 0.01	< 10	< 10	154	< 10	258
N113089	205	294	3.78	210	1	< 0.01	31	150	< 2	2	19	5	0.01	< 10	< 10	160	< 10	376
N113090	205	294	4.28	220	1	< 0.01	38	110	6	8	20	4	0.01	< 10	< 10	163	< 10	1015
N113091	205	294	3.67	195	4	< 0.01	30	120	8	4	17	3	0.03	< 10	< 10	144	< 10	3780
N113092	205	294	3.78	220	2	< 0.01	31	90	6	< 2	19	6	0.02	< 10	< 10	158	< 10	904
N113093	205	294	2.98	180	4	< 0.01	29	90	6	8	16	3	0.02	< 10	< 10	137	< 10	1460
N113094	205	294	2.67	175	15	< 0.01	25	50	8	< 2	13	2	0.02	< 10	< 10	113	< 10	5090
N113095	205	294	2.96	830	< 1	0.01	40	330	< 2	2	15	20	0.36	< 10	< 10	172	< 10	110
N113096	205	294	2.11	860	< 1	0.01	44	330	< 2	2	7	16	0.29	< 10	< 10	124	< 10	80
N113097	205	294	2.14	895	< 1	0.01	39	330	< 2	< 2	5	19	0.31	< 10	< 10	115	< 10	70
N113098	205	294	4.40	460	< 1	< 0.01	31	170	< 2	2	22	4	0.17	< 10	< 10	169	< 10	666

CERTIFICATION: David Chen

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

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Project : ICE: ID97-07
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Invoice No. : 19732355
P.O. Number :
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CERTIFICATE OF ANALYSIS A9732355

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
N112822	205	294	0.4	2.88	< 2	40	< 0.5	< 2	4.96	< 0.5	20	96	68	3.41	< 10	1	0.02	< 10	1.71	780	< 1

CERTIFICATION: Ian Bucklen

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

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CERTIFICATE OF ANALYSIS A9732355

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
N112822	205	294	0.04	45	190	< 2	< 2	6	73	0.20	< 10	< 10	94	< 10	46

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Project : ICE: ID97-16
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CERTIFICATE OF ANALYSIS A9732352

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Spec Gr S.G.	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm
N113103	208	294	360	2.71	3.72	13	0.06	< 10	< 20	< 5	10	0.86	5	760	120	24400	29.2	< 10	0.01	0.03	50
N113104	208	294	380	2.86	3.94	10	0.03	50	360	< 5	20	0.12	5	550	80	25400	>30.0	< 10	0.01	0.03	50
N113105	208	294	430	3.32	3.81	8	0.08	< 10	400	< 5	< 10	0.16	15	910	90	29400	>30.0	< 10	0.01	0.08	40

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SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113103	208	294	30	< 0.01	15	200	35	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	500
N113104	208	294	20	< 0.01	10	< 100	50	20	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	1195
N113105	208	294	35	< 0.01	10	< 100	65	40	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	4100

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

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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
N113099	205	226	< 0.2	2.61	< 2	70	< 0.5	2	2.17	< 0.5	25	24	111	7.04	10	< 1	0.06	< 10	2.01	1180	< 1
N113100	205	226	< 0.2	0.89	< 2	370	< 0.5	< 2	2.11	< 0.5	11	130	55	4.95	< 10	< 1	0.02	< 10	0.59	775	< 1
N113101	205	226	< 0.2	3.74	< 2	50	< 0.5	< 2	1.26	< 0.5	37	36	125	10.00	10	< 1	< 0.01	< 10	2.93	1320	< 1
N113102	205	226	0.2	1.61	< 2	40	< 0.5	< 2	1.52	< 0.5	63	81	2160	13.70	10	< 1	0.01	10	1.03	570	5
N113106	205	226	3.0	0.94	14	< 10	< 0.5	Intf*	0.70	9.5	296	86	>10000	>15.00	10	3	0.01	< 10	0.61	230	8
N113107	205	226	< 0.2	3.60	< 2	250	< 0.5	< 2	3.58	< 0.5	27	153	318	5.40	10	< 1	0.07	< 10	2.59	775	< 1
N113108	205	226	< 0.2	3.57	< 2	150	< 0.5	< 2	4.67	< 0.5	25	116	145	5.37	10	< 1	0.01	< 10	2.32	805	< 1

CERTIFICATION: Ian Bichler

*INTERFERENCE: Cu ON Bi AND P.

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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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	Spec Gr S.G.
N113099	205	226	0.01	17	680	< 2	< 2	8	22	0.61	< 10	< 10	213	< 10	112	-----
N113100	205	226	< 0.01	22	980	2	< 2	1	28	0.04	< 10	< 10	133	< 10	30	-----
N113101	205	226	< 0.01	25	1090	< 2	< 2	17	21	0.52	< 10	< 10	288	< 10	158	-----
N113102	205	226	< 0.01	29	4720	6	< 2	3	24	0.04	< 10	< 10	318	< 10	198	2.94
N113106	205	226	< 0.01	14	Intf*	44	< 2	1	25	0.04	< 10	< 10	188	10	4560	3.41
N113107	205	226	0.04	60	330	< 2	< 2	11	26	0.25	< 10	< 10	128	< 10	106	-----
N113108	205	226	0.03	47	280	< 2	< 2	11	43	0.30	< 10	< 10	157	< 10	72	-----

CERTIFICATION: David Bradley

*INTERFERENCE: Cu ON Bi AND P.

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

Project : ICE-ID97-18
Comments:

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Certificate Date: 24-JUL-97
Invoice No. : 19732317
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9732317

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
N113110	205	294	0.2	3.65	< 2	110	< 0.5	< 2	4.07	< 0.5	32	60	92	7.24	10	< 1	0.05	< 10	2.61	1570	< 1
N113111	205	294	2.0	1.62	18	< 10	< 0.5	Intf*	3.04	1.0	506	68	>10000	>15.00	< 10	3	0.03	< 10	0.96	935	15
N113112	205	294	0.4	4.11	< 2	110	< 0.5	< 2	4.67	< 0.5	32	220	2220	8.14	10	2	0.06	< 10	2.76	1335	< 1
N113113	205	294	< 0.2	3.12	< 2	70	< 0.5	< 2	2.06	< 0.5	29	68	226	5.79	10	< 1	0.01	< 10	2.80	925	< 1
N113114	205	294	< 0.2	3.79	< 2	420	< 0.5	< 2	2.18	< 0.5	33	95	138	6.06	10	< 1	0.07	< 10	3.38	955	< 1
N113115	205	294	6.0	2.98	< 2	< 10	< 0.5	< 2	0.59	14.5	155	86	4050	13.10	10	< 1	< 0.01	< 10	2.24	390	16
N113116	205	294	1.0	2.28	< 2	40	< 0.5	< 2	0.61	8.5	65	50	272	12.60	10	< 1	0.08	< 10	1.79	490	4
N113117	205	294	2.2	1.49	< 2	< 10	< 0.5	< 2	0.21	1.5	169	58	370	>15.00	< 10	< 1	0.01	< 10	0.99	215	7
N113118	205	294	< 0.2	2.04	< 2	50	< 0.5	< 2	1.70	< 0.5	27	11	88	6.31	< 10	< 1	0.16	< 10	1.60	675	< 1
N113119	205	294	0.6	2.58	< 2	30	< 0.5	< 2	1.21	< 0.5	90	33	1405	11.30	10	< 1	0.12	< 10	2.06	475	< 1
N113120	205	294	0.8	3.54	< 2	20	< 0.5	< 2	0.66	< 0.5	175	82	872	>15.00	10	< 1	0.02	< 10	2.64	505	4
N113121	205	294	0.2	3.74	< 2	< 10	< 0.5	< 2	0.15	< 0.5	139	96	406	>15.00	10	< 1	< 0.01	< 10	2.80	350	< 1
N113122	205	294	0.4	2.97	< 2	< 10	< 0.5	< 2	0.68	< 0.5	236	79	79	>15.00	< 10	< 1	< 0.01	< 10	2.18	205	< 1
N113123	205	294	0.2	2.49	< 2	< 10	< 0.5	< 2	0.20	< 0.5	124	69	132	>15.00	< 10	< 1	< 0.01	< 10	1.73	120	< 1
N113124	205	294	0.2	2.18	< 2	< 10	< 0.5	< 2	0.09	< 0.5	116	62	72	>15.00	< 10	1	< 0.01	< 10	1.47	90	< 1
N113125	205	294	0.4	2.42	< 2	< 10	< 0.5	< 2	0.27	< 0.5	91	79	40	>15.00	10	1	< 0.01	< 10	1.69	105	< 1
N113126	205	294	0.6	2.44	< 2	< 10	< 0.5	< 2	0.24	< 0.5	105	73	50	>15.00	< 10	< 1	< 0.01	< 10	1.61	95	< 1
N113127	205	294	0.6	2.62	< 2	< 10	< 0.5	< 2	0.71	< 0.5	113	67	97	>15.00	10	< 1	< 0.01	< 10	1.88	125	< 1
N113128	205	294	0.2	3.04	< 2	10	< 0.5	< 2	1.20	< 0.5	108	64	18	>15.00	10	< 1	< 0.01	< 10	2.29	120	1
N113129	205	294	0.2	3.32	< 2	10	< 0.5	< 2	0.60	< 0.5	124	78	24	>15.00	10	2	< 0.01	< 10	2.51	155	< 1
N113130	205	294	0.6	3.03	< 2	10	< 0.5	< 2	0.52	< 0.5	137	67	48	>15.00	10	< 1	< 0.01	< 10	2.14	360	< 1
N113131	205	294	0.2	6.21	< 2	30	< 0.5	< 2	1.74	< 0.5	56	111	99	10.95	20	< 1	< 0.01	< 10	4.87	615	< 1
N113132	205	294	0.2	4.05	< 2	340	< 0.5	< 2	2.41	< 0.5	33	107	95	6.87	10	< 1	< 0.01	< 10	3.62	805	< 1
N113133	205	294	0.4	4.06	< 2	90	< 0.5	< 2	3.32	< 0.5	33	118	71	6.92	10	1	0.03	< 10	3.92	1125	< 1
N113134	205	294	0.6	4.05	< 2	140	< 0.5	< 2	2.55	< 0.5	33	105	132	6.97	10	3	0.03	< 10	3.99	950	< 1
N113135	205	294	< 0.2	3.70	< 2	60	< 0.5	< 2	2.60	< 0.5	29	67	80	6.15	10	< 1	0.07	< 10	3.01	1110	< 1

CERTIFICATION: Ivan Bichler

* INTERFERENCE: Cu on Bi and P

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Y1A 3S9

Project : ICE-ID97-18
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Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9732317

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
N113110	205	294	< 0.01	38	420	4	< 2	24	44	0.41	< 10	< 10	198	< 10	112
N113111	205	294	< 0.01	47	Intf*	78	< 2	11	24	0.04	< 10	< 10	107	< 10	406
N113112	205	294	0.02	54	220	2	< 2	24	45	0.09	< 10	< 10	153	< 10	176
N113113	205	294	0.01	36	320	8	< 2	7	18	0.37	< 10	< 10	131	< 10	86
N113114	205	294	< 0.01	48	290	< 2	< 2	12	44	0.33	< 10	< 10	129	< 10	132
N113115	205	294	< 0.01	27	130	34	< 2	11	5	0.06	< 10	< 10	104	< 10	4750
N113116	205	294	< 0.01	14	200	12	< 2	9	9	0.23	< 10	< 10	121	< 10	4630
N113117	205	294	< 0.01	13	10	8	< 2	5	2	0.04	< 10	10	61	< 10	958
N113118	205	294	< 0.01	6	380	< 2	< 2	11	26	0.41	< 10	< 10	171	< 10	166
N113119	205	294	< 0.01	11	260	< 2	< 2	14	15	0.32	< 10	< 10	154	< 10	548
N113120	205	294	< 0.01	23	50	< 2	< 2	12	8	0.13	< 10	< 10	88	< 10	536
N113121	205	294	< 0.01	26	< 10	< 2	2	13	3	0.06	< 10	< 10	100	< 10	166
N113122	205	294	< 0.01	21	< 10	< 2	< 2	10	4	0.03	< 10	< 10	63	< 10	86
N113123	205	294	< 0.01	20	10	< 2	6	8	1	0.02	< 10	< 10	64	< 10	98
N113124	205	294	< 0.01	15	< 10	< 2	< 2	7	1	0.04	< 10	10	63	< 10	52
N113125	205	294	< 0.01	18	< 10	< 2	< 2	8	2	0.04	< 10	< 10	70	< 10	60
N113126	205	294	< 0.01	18	< 10	< 2	< 2	9	1	0.02	< 10	< 10	74	< 10	56
N113127	205	294	< 0.01	19	< 10	< 2	2	10	5	0.03	< 10	10	78	< 10	114
N113128	205	294	< 0.01	22	10	< 2	< 2	11	5	0.04	< 10	10	86	< 10	64
N113129	205	294	< 0.01	23	10	< 2	< 2	12	4	0.04	< 10	< 10	89	< 10	76
N113130	205	294	< 0.01	20	< 10	< 2	< 2	11	8	0.02	< 10	10	92	< 10	150
N113131	205	294	< 0.01	40	180	< 2	< 2	25	27	0.01	< 10	< 10	198	< 10	226
N113132	205	294	0.01	44	280	< 2	< 2	14	48	0.26	< 10	< 10	149	< 10	108
N113133	205	294	0.02	48	320	< 2	< 2	24	48	0.16	< 10	< 10	201	< 10	146
N113134	205	294	< 0.01	43	330	< 2	< 2	21	45	0.31	< 10	< 10	195	< 10	186
N113135	205	294	< 0.01	37	260	< 2	< 2	8	19	0.34	< 10	< 10	136	< 10	86

CERTIFICATION:

* INTERFERENCE: Cu on Bi and P

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

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Project : ICE-ID97-19
Comments:

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Invoice No. : 19732298
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9732298

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
N113136	205	294	0.4	2.99	< 2	120	< 0.5	< 2	3.99	1.5	41	57	6360	9.12	10	< 1	0.08	< 10	1.50	1315	2
N113137	205	294	< 0.2	0.88	2	450	< 0.5	< 2	3.61	< 0.5	12	141	83	5.13	< 10	< 1	0.02	< 10	0.32	465	2
N113138	205	294	< 0.2	2.88	< 2	110	< 0.5	< 2	2.20	< 0.5	24	20	91	4.99	10	1	0.07	< 10	1.75	805	1
N113139	205	294	< 0.2	3.08	< 2	60	< 0.5	< 2	2.62	< 0.5	26	29	71	5.31	10	< 1	< 0.01	< 10	1.93	900	< 1
N113140	205	294	< 0.2	3.51	< 2	80	< 0.5	< 2	3.91	< 0.5	31	44	143	6.71	10	< 1	0.01	< 10	2.68	1225	1
N113143	205	294	< 0.2	4.30	4	190	< 0.5	< 2	4.23	< 0.5	23	120	408	4.53	10	< 1	0.06	< 10	2.19	720	2
N113144	205	294	< 0.2	3.65	< 2	50	< 0.5	< 2	2.88	< 0.5	22	89	333	4.79	10	< 1	0.10	< 10	2.24	690	1
N113145	205	294	< 0.2	3.98	< 2	60	< 0.5	< 2	4.02	< 0.5	22	114	291	5.22	10	< 1	0.06	< 10	2.43	785	< 1
N113146	205	294	< 0.2	3.50	< 2	50	< 0.5	< 2	3.29	< 0.5	31	84	62	5.29	10	< 1	0.05	< 10	3.97	1115	1
N113147	205	294	< 0.2	3.97	< 2	70	< 0.5	< 2	2.48	< 0.5	32	89	36	5.61	< 10	< 1	0.10	< 10	4.47	1120	< 1
N113148	205	294	0.2	4.42	< 2	210	< 0.5	< 2	3.25	< 0.5	36	93	24	5.73	10	< 1	0.06	< 10	4.89	1135	< 1
N113160	205	294	< 0.2	3.02	< 2	110	< 0.5	< 2	1.56	< 0.5	27	59	95	5.11	10	< 1	0.09	< 10	2.76	905	< 1
N113161	205	294	< 0.2	3.53	< 2	20	< 0.5	< 2	3.06	< 0.5	28	47	86	5.24	10	< 1	0.05	< 10	1.89	760	1
N113162	205	294	< 0.2	3.24	< 2	20	< 0.5	< 2	2.45	< 0.5	28	63	79	5.06	10	< 1	0.03	< 10	1.98	805	< 1

CERTIFICATION: Stuart Buchler

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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	Spec Gr S.G.
N113136	205	294	0.03	25	1210	< 2	8	16	56	0.15	< 10	< 10	245	< 10	70	-----
N113137	205	294	0.01	10	1870	4	6	3	24	0.03	< 10	< 10	126	< 10	24	-----
N113138	205	294	< 0.01	31	500	< 2	2	9	28	0.43	< 10	< 10	157	< 10	72	-----
N113139	205	294	< 0.01	30	510	< 2	< 2	11	25	0.42	< 10	< 10	174	< 10	70	-----
N113140	205	294	< 0.01	34	590	< 2	6	17	30	0.45	< 10	< 10	209	< 10	168	2.83
N113143	205	294	0.03	48	280	< 2	6	11	28	0.21	< 10	< 10	109	< 10	72	2.89
N113144	205	294	0.03	51	320	< 2	2	6	17	0.23	< 10	< 10	101	< 10	78	-----
N113145	205	294	0.02	49	330	< 2	< 2	9	24	0.23	< 10	< 10	125	< 10	80	-----
N113146	205	294	< 0.01	60	630	< 2	< 2	8	34	0.38	< 10	< 10	104	< 10	96	-----
N113147	205	294	< 0.01	47	540	< 2	2	9	39	0.43	< 10	< 10	129	< 10	90	-----
N113148	205	294	< 0.01	66	930	2	< 2	15	47	0.44	< 10	< 10	124	< 10	112	-----
N113160	205	294	0.01	35	360	< 2	< 2	7	21	0.41	< 10	< 10	148	< 10	96	-----
N113161	205	294	0.02	40	410	< 2	< 2	6	17	0.36	< 10	< 10	150	< 10	74	-----
N113162	205	294	0.03	57	420	< 2	2	5	14	0.36	< 10	< 10	132	< 10	74	-----

CERTIFICATION: Ian Bichler

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British Columbia, Canada V7J 2C1
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Y1A 3S9

Project : ICE-ID97-19
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Total Pages : 1
Certificate Date: 27-JUL-97
Invoice No. : 19732297
P.O. Number :
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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9732297

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Spec Gr S.G.	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
N113141	208	294	350	1.76	4.18	4.6	0.08	20	< 10	< 0.5	Intf*	1.17	0.5	731	56	>10000	>15.00	< 10	< 1	< 0.01	< 10
N113142	208	294	710	4.22	3.93	20.4	0.17	24	< 10	< 0.5	Intf*	3.26	1.5	507	46	>10000	>15.00	< 10	< 1	0.01	< 10
N113149	208	294	20	0.25	2.92	1.4	5.00	< 2	< 10	< 0.5	< 2	0.28	2.0	103	120	2270	11.85	10	3	< 0.01	< 10
N113150	208	294	30	0.88	2.89	2.8	4.47	< 2	30	< 0.5	< 2	0.37	2.0	102	116	8460	11.35	10	< 1	< 0.01	< 10
N113151	208	294	20	0.23	2.96	1.6	5.42	< 2	< 10	< 0.5	< 2	0.19	< 0.5	97	129	2140	13.65	10	< 1	< 0.01	< 10
N113152	208	294	30	1.07	2.99	5.0	4.24	< 2	< 10	< 0.5	Intf*	0.22	< 0.5	123	108	>10000	12.65	10	< 1	< 0.01	< 10
N113153	208	294	30	0.87	2.89	3.8	4.07	< 2	< 10	< 0.5	< 2	0.16	0.5	120	118	8210	11.20	10	< 1	< 0.01	< 10
N113154	208	294	65	1.29	3.00	7.8	3.36	< 2	< 10	< 0.5	Intf*	0.20	2.5	157	122	>10000	13.70	10	< 1	< 0.01	< 10
N113155	208	294	50	1.16	3.02	7.4	3.09	< 2	< 10	< 0.5	Intf*	0.18	5.5	200	105	>10000	13.25	10	< 1	< 0.01	< 10
N113156	208	294	35	0.49	2.98	3.0	3.48	< 2	< 10	< 0.5	< 2	0.23	6.5	118	118	4500	11.30	10	< 1	< 0.01	< 10
N113157	208	294	40	0.54	2.98	3.2	3.34	6	< 10	< 0.5	< 2	0.28	1.0	121	123	5160	12.50	10	< 1	< 0.01	< 10
N113158	208	294	60	0.92	3.03	5.0	3.12	< 2	< 10	< 0.5	< 2	0.23	2.0	144	106	8650	13.55	10	< 1	< 0.01	< 10
N113159	208	294	25	0.20	2.96	1.2	3.68	< 2	10	< 0.5	< 2	0.29	< 0.5	139	116	1860	12.35	10	< 1	< 0.01	< 10

CERTIFICATION: Ian Bichler

* INTERFERNCES: Cu on Bi and P

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SAMPLE	PREP CODE		Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N113141	208	294	0.04	125	21	< 0.01	7	Intf*	42	4	< 1	4	< 0.01	< 10	10	33	< 10	744
N113142	208	294	0.12	315	18	< 0.01	5	Intf*	52	4	< 1	11	0.01	< 10	< 10	11	< 10	794
N113149	208	294	4.07	345	2	< 0.01	34	180	6	< 2	17	4	0.04	< 10	< 10	152	< 10	900
N113150	208	294	3.88	360	4	< 0.01	32	170	6	< 2	17	4	0.11	< 10	< 10	141	< 10	1115
N113151	208	294	4.69	410	1	< 0.01	41	200	4	< 2	22	3	0.10	< 10	< 10	180	< 10	196
N113152	208	294	3.48	345	4	< 0.01	32	Intf*	6	< 2	16	3	0.10	< 10	< 10	134	< 10	328
N113153	208	294	3.64	345	15	< 0.01	33	90	4	2	16	2	0.10	< 10	< 10	128	< 10	492
N113154	208	294	2.60	300	30	< 0.01	28	Intf*	18	< 2	13	2	0.12	< 10	< 10	121	< 10	650
N113155	208	294	2.60	265	16	< 0.01	25	Intf*	28	< 2	12	2	0.11	< 10	< 10	106	< 10	1965
N113156	208	294	2.81	275	7	< 0.01	26	40	8	2	14	2	0.12	< 10	< 10	108	< 10	2080
N113157	208	294	2.45	250	5	< 0.01	26	40	12	2	13	3	0.11	< 10	< 10	108	< 10	518
N113158	208	294	2.29	235	4	< 0.01	23	50	14	2	12	3	0.08	< 10	< 10	101	< 10	814
N113159	208	294	2.62	375	5	< 0.01	28	100	38	< 2	15	3	0.14	< 10	< 10	112	< 10	568

CERTIFICATION: Ian Pitcher

* INTERFERNCES: Cu on Bi and P

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

: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-ID97-13
Comments:

Certificate Date: 17-JUL-97
Invoice No. : 19731685
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731685

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %	Zn %	Spec Gr S.G.
N113019	244 --	-----	-----	0.07	-----
N113020	244 --	-----	-----	0.14	-----
N113021	244 --	-----	-----	0.15	-----
N113022	244 --	-----	-----	-----	-----
N113023	244 --	-----	-----	-----	-----
N113024	244 --	-----	-----	-----	-----
N113025	244 --	-----	-----	0.27	-----
N113026	244 --	-----	-----	0.97	-----
N113027	244 --	-----	-----	-----	-----
N113028	244 --	-----	-----	0.65	-----
N113029	244 --	-----	-----	0.06	-----
N113030	244 --	-----	-----	0.28	-----
N113031	244 --	50	-----	0.06	3.16
N113032	244 --	30	-----	0.03	3.11
N113033	244 --	30	-----	0.02	2.91
N113034	244 --	45	-----	0.04	2.87
N113035	244 --	45	-----	0.17	2.86
N113036	244 --	35	0.97	0.20	3.01
N113037	244 --	30	-----	0.31	3.10
N113038	244 --	50	-----	0.21	3.05
N113039	244 --	50	-----	0.36	3.09
N113040	244 --	40	0.32	0.45	3.01
N113041	244 --	85	-----	0.38	3.08
N113042	244 --	25	0.24	0.15	2.87
N113043	244 --	30	0.36	0.31	2.91

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Invoice No. : 19731654
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Account : MPO

CERTIFICATE OF ANALYSIS A9731654

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N112970	244 --	465	0.29
N112971	244 --	270	-----
N112972	244 --	80	0.21
N112973	244 --	60	0.16
N112974	244 --	100	0.30
N112975	244 --	265	0.49
N112976	244 --	140	0.46
N112977	244 --	75	0.24
N112978	244 --	150	0.40
N112979	244 --	120	0.27
N112980	244 --	45	0.35
N112981	244 --	20	0.41
N112982	244 --	50	0.67
N112983	244 --	35	0.39
N112984	244 --	30	0.34
N112985	244 --	75	0.23
N112986	244 --	90	0.43
N112987	244 --	55	0.24
N112988	244 --	30	0.50
N112989	244 --	65	-----
N112994	244 --	50	0.11
N112995	244 --	30	0.63
N112996	244 --	60	0.22

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Invoice No. : I9731653
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731653

SAMPLE	PREP CODE		Au ppb FA+AA
N112918	244	--	60

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Certificate Date: 15-JUL-97
Invoice No. : I9731652
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731652

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N112896	244 --	190	0.72
N112902	244 --	130	0.31

CERTIFICATION: Saad Zaidi

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Project : ICE-ID97-08
Comments:

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P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731651

SAMPLE	PREP CODE		Au ppb FA+AA									
N112888	244	--	510									

CERTIFICATION: Mark Vonk

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Certificate Date: 15-JUL-97
Invoice No. :19731650
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9731650

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %								
N112662	244	--	115	0.58								
N112663	244	--	135	0.73								
N112664	244	--	80	0.38								
N112665	244	--	70	0.58								
N112666	244	--	85	-----								
N112667	244	--	215	0.23								

CERTIFICATION: Said Letnaa

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Project : ICE-ID97-03
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Invoice No. : I9731649
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731649

SAMPLE	PREP CODE		Au ppb FA+AA									
N112628	244	--	480									

CERTIFICATION: Thanh Vanh

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Invoice No. :19731463
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CERTIFICATE OF ANALYSIS A9731463

SAMPLE	PREP CODE		Cu %	Zn %								
N113022	244	--	-----	1.83								
N113023	244	--	-----	2.33								
N113024	244	--	-----	1.64								
N113027	244	--	-----	2.52								
N113031	244	--	1.83	-----								
N113032	244	--	1.21	-----								
N113033	244	--	1.87	-----								
N113034	244	--	1.06	-----								
N113035	244	--	1.08	-----								
N113037	244	--	1.26	-----								
N113038	244	--	2.51	-----								
N113039	244	--	1.82	-----								
N113041	244	--	1.60	-----								

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Certificate Date: 10-JUL-97
Invoice No. : I9731301
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731301

SAMPLE	PREP CODE	Cu %	Zn %
N112918	244 --	2.93	-----
N112929	244 --	-----	1.29

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Certificate Date: 09-JUL-97
Invoice No. : 19731100
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9731100

SAMPLE	PREP CODE	Cu %
N112971	244 --	1.09
N112989	244 --	1.61

CERTIFICATION: Said Celiz

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Invoice No. : I9731005
P.O. Number :
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CERTIFICATE OF ANALYSIS A9731005

SAMPLE	PREP CODE		Au ppb FA+AA
N112912	244	--	50

CERTIFICATION: Mark Vinh

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Project : ICE-ID97-09
Comments:

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Certificate Date: 12-JUL-97
Invoice No. :I9730845
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9730845

SAMPLE	PREP CODE	Au ppb FA+AA
N112875	244 --	350
N112881	244 --	665

CERTIFICATION: Thank Vrak

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Project : ICE-ID97-09
Comments:

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Total Pages : 1
Certificate Date: 08-JUL-97
Invoice No. : I9730744
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9730744

SAMPLE	PREP CODE		Cu %
N112881	244	--	2.04

CERTIFICATION: Saeed Ghaffari

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CERTIFICATE OF ANALYSIS A9730591

SAMPLE	PREP CODE		Au ppb FA+AA	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
N113014	208	226	-----	< 0.2	2.89	< 2	60	< 0.5	< 2	7.57	< 0.5	24	49	61	5.33	10	< 1	< 0.01	< 10	2.13	1330
N113015	208	226	-----	< 0.2	3.27	< 2	50	< 0.5	< 2	3.51	< 0.5	26	38	70	5.87	10	< 1	< 0.01	< 10	2.11	1200
N113016	208	226	-----	< 0.2	3.91	< 2	190	< 0.5	< 2	1.97	< 0.5	35	58	96	7.55	10	< 1	< 0.01	< 10	3.06	1435
N113017	208	226	-----	0.6	1.87	8	20	< 0.5	< 2	2.37	1.0	185	62	2130	>15.00	10	< 1	0.18	< 10	1.12	2440
N113018	208	226	275	1.4	0.74	4	< 10	< 0.5	< 2	0.67	2.0	347	29	1715	>15.00	< 10	1	< 0.01	< 10	0.32	810
N113019	208	226	120	3.0	0.06	12	< 10	< 0.5	Intf*	0.06	3.5	1115	40	>10000	>15.00	< 10	2	< 0.01	< 10	0.05	175
N113020	208	226	470	18.4	0.06	28	< 10	< 0.5	Intf*	0.10	8.5	1195	42	>10000	>15.00	< 10	1	< 0.01	< 10	0.07	145
N113021	208	226	575	37.0	< 0.01	20	< 10	< 0.5	Intf*	0.11	13.5	1110	42	>10000	>15.00	< 10	3	< 0.01	< 10	< 0.01	65
N113022	208	226	560	42.2	< 0.01	26	< 10	< 0.5	Intf*	0.03	>100.0	1535	23	>10000	>15.00	< 10	8	< 0.01	< 10	0.01	55
N113023	208	226	580	29.4	< 0.01	18	< 10	< 0.5	Intf*	0.71	>100.0	1305	42	>10000	>15.00	< 10	8	< 0.01	< 10	0.02	115
N113024	208	226	390	14.0	< 0.01	20	< 10	< 0.5	Intf*	0.15	>100.0	1680	36	>10000	>15.00	< 10	3	< 0.01	< 10	0.07	60
N113025	208	226	645	21.2	< 0.01	24	< 10	< 0.5	Intf*	0.08	32.0	1040	45	>10000	>15.00	< 10	4	< 0.01	< 10	0.03	60
N113026	208	226	830	25.0	< 0.01	30	< 10	< 0.5	Intf*	0.04	>100.0	1010	44	>10000	>15.00	< 10	4	< 0.01	< 10	< 0.01	45
N113027	208	226	765	20.0	< 0.01	36	< 10	< 0.5	Intf*	1.01	>100.0	663	33	>10000	>15.00	< 10	2	< 0.01	< 10	< 0.01	170
N113028	208	226	270	2.2	1.08	14	< 10	< 0.5	Intf*	0.12	33.0	223	91	>10000	>15.00	< 10	1	0.10	< 10	0.35	195
N113029	208	226	70	1.4	1.07	10	< 10	< 0.5	Intf*	0.19	3.5	139	75	>10000	>15.00	< 10	< 1	0.35	< 10	0.36	150
N113030	208	226	40	3.4	0.64	20	< 10	< 0.5	Intf*	0.05	13.0	348	66	>10000	>15.00	< 10	< 1	0.35	< 10	0.14	55
N113031	208	226	-----	1.4	3.06	< 2	< 10	< 0.5	Intf*	0.13	1.5	365	106	>10000	>15.00	< 10	< 1	0.28	< 10	1.50	290
N113032	208	226	-----	1.4	4.30	< 2	10	< 0.5	Intf*	0.53	0.5	342	161	>10000	>15.00	10	< 1	0.21	< 10	2.37	415
N113033	208	226	-----	4.0	4.98	< 2	30	< 0.5	Intf*	0.61	0.5	228	178	>10000	11.30	10	< 1	0.12	< 10	3.56	420
N113034	208	226	-----	2.4	6.89	< 2	20	< 0.5	Intf*	0.68	0.5	162	238	>10000	11.55	10	< 1	0.03	< 10	5.57	590
N113035	208	226	-----	2.4	7.83	< 2	10	< 0.5	Intf*	1.71	1.5	86	231	>10000	12.45	10	1	< 0.01	< 10	5.87	790
N113036	208	226	-----	5.0	4.96	< 2	30	< 0.5	< 2	2.55	8.0	192	181	9980	14.45	10	< 1	0.03	< 10	3.36	840
N113037	208	226	-----	5.6	3.13	2	10	< 0.5	Intf*	0.24	11.5	201	133	>10000	14.80	10	< 1	0.05	< 10	1.76	440
N113038	208	226	-----	10.2	3.36	12	30	< 0.5	Intf*	2.29	9.0	251	153	>10000	>15.00	10	< 1	0.07	< 10	2.74	745
N113039	208	226	-----	7.2	3.26	10	10	< 0.5	Intf*	0.16	12.0	225	131	>10000	>15.00	10	< 1	0.07	< 10	1.85	475
N113040	208	226	-----	2.4	3.73	2	10	< 0.5	< 2	0.46	9.5	158	158	3300	15.00	10	< 1	0.06	< 10	2.14	430
N113041	208	226	-----	5.8	2.64	8	< 10	< 0.5	Intf*	0.06	6.5	332	120	>10000	15.00	< 10	< 1	0.07	< 10	1.47	255
N113042	208	226	-----	1.0	4.33	< 2	10	< 0.5	< 2	0.14	2.5	144	164	2460	11.30	10	1	0.05	< 10	2.78	335
N113043	208	226	-----	1.4	3.05	< 2	10	< 0.5	< 2	0.61	8.0	171	134	3420	10.95	< 10	< 1	0.01	< 10	2.03	435
N113044	208	226	-----	< 0.2	4.10	< 2	60	< 0.5	< 2	0.93	< 0.5	39	140	322	7.24	10	< 1	0.07	< 10	2.89	745
N113045	208	226	-----	< 0.2	3.76	< 2	150	< 0.5	< 2	2.55	< 0.5	62	151	264	8.07	10	< 1	0.06	< 10	2.78	935
N113046	208	226	-----	0.2	0.40	16	< 10	< 0.5	< 2	3.22	0.5	537	59	408	>15.00	< 10	< 1	0.01	< 10	1.10	850
N113047	208	226	-----	0.2	0.87	4	< 10	< 0.5	< 2	3.48	< 0.5	359	50	305	15.00	< 10	< 1	0.04	< 10	1.38	885
N113048	208	226	-----	0.2	1.33	8	40	< 0.5	< 2	2.13	< 0.5	249	41	1055	10.85	< 10	< 1	0.12	< 10	1.17	610
N113049	208	226	-----	< 0.2	2.27	< 2	160	< 0.5	< 2	2.48	< 0.5	41	96	141	5.89	< 10	1	0.08	< 10	1.34	1155
N113050	208	226	-----	0.2	1.56	22	10	< 0.5	< 2	1.79	< 0.5	231	93	346	13.45	< 10	< 1	0.05	< 10	1.51	800
N113051	208	226	-----	0.2	1.11	92	10	< 0.5	< 2	1.30	< 0.5	145	88	3540	12.30	< 10	< 1	0.08	< 10	1.10	620
N113052	208	226	-----	0.4	0.88	346	10	< 0.5	< 2	2.99	0.5	98	73	4280	11.35	< 10	3	0.05	< 10	1.24	690
N113053	208	226	-----	< 0.2	3.90	< 2	30	< 0.5	< 2	1.59	0.5	43	123	208	6.97	10	< 1	0.04	< 10	2.54	465

CERTIFICATION: Ian Bichler

* INTERFERENCES: Cu on Bi and P

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Project : ICE-ID97-13
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Total : 2
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Invoice No. : I9730591
P.O. Number :
Account : MPO

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CERTIFICATE OF ANALYSIS A9730591

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N113014	208	226	< 1	< 0.01	28	450	< 2	< 2	12	31	0.41	< 10	< 10	155	< 10	74	-----	-----
N113015	208	226	< 1	0.01	28	460	< 2	< 2	8	17	0.40	< 10	< 10	154	< 10	106	-----	-----
N113016	208	226	< 1	< 0.01	37	490	< 2	< 2	13	15	0.47	< 10	< 10	203	< 10	138	-----	2.84
N113017	208	226	5	0.06	11	1940	16	< 2	< 1	30	< 0.01	< 10	< 10	91	< 10	240	-----	3.42
N113018	208	226	15	< 0.01	14	370	38	< 2	< 1	10	< 0.01	< 10	< 10	47	< 10	312	0.18	4.34
N113019	208	226	53	< 0.01	6	Intf*	26	< 2	< 1	< 1	< 0.01	< 10	< 10	17	< 10	528	3.22	4.37
N113020	208	226	34	< 0.01	8	Intf*	36	< 2	< 1	< 1	< 0.01	< 10	< 10	13	< 10	1175	3.64	4.04
N113021	208	226	33	< 0.01	9	Intf*	44	< 2	< 1	< 1	< 0.01	< 10	< 10	5	< 10	1320	8.13	4.12
N113022	208	226	66	< 0.01	10	Intf*	48	< 2	< 1	< 1	< 0.01	< 10	< 10	4	< 10	>10000	5.44	4.11
N113023	208	226	40	< 0.01	9	Intf*	66	< 2	< 1	< 1	< 0.01	< 10	< 10	3	< 10	>10000	8.43	4.12
N113024	208	226	32	< 0.01	19	Intf*	142	< 2	< 1	< 1	< 0.01	< 10	< 10	8	< 10	>10000	10.20	4.11
N113025	208	226	43	< 0.01	9	Intf*	78	< 2	< 1	< 1	< 0.01	< 10	< 10	12	< 10	2510	7.96	4.47
N113026	208	226	43	< 0.01	7	Intf*	90	< 2	< 1	< 1	< 0.01	< 10	< 10	7	< 10	8840	7.58	4.24
N113027	208	226	33	< 0.01	8	Intf*	100	< 2	< 1	< 1	< 0.01	< 10	< 10	4	< 10	>10000	7.48	4.10
N113028	208	226	11	0.04	33	Intf*	36	< 2	7	< 1	< 0.01	< 10	< 10	63	< 10	5700	1.85	3.18
N113029	208	226	10	0.01	36	Intf*	16	< 2	5	< 1	< 0.01	< 10	< 10	43	< 10	514	1.40	3.21
N113030	208	226	22	< 0.01	31	Intf*	30	< 2	3	< 1	< 0.01	< 10	< 10	24	< 10	2380	3.15	3.60
N113031	208	226	2	0.01	37	Intf*	2	< 2	9	1	< 0.01	< 10	< 10	97	< 10	448	-----	-----
N113032	208	226	1	0.01	53	Intf*	< 2	< 2	12	6	< 0.01	< 10	< 10	118	< 10	208	-----	-----
N113033	208	226	1	0.01	50	Intf*	< 2	< 2	16	5	< 0.01	< 10	< 10	165	< 10	176	-----	-----
N113034	208	226	< 1	< 0.01	56	Intf*	2	2	18	8	< 0.01	< 10	< 10	277	< 10	306	-----	-----
N113035	208	226	1	< 0.01	53	Intf*	2	< 2	20	23	< 0.01	< 10	< 10	320	< 10	1505	-----	-----
N113036	208	226	46	< 0.01	38	280	8	< 2	14	26	< 0.01	< 10	< 10	230	< 10	1680	-----	-----
N113037	208	226	90	< 0.01	27	Intf*	16	2	9	1	< 0.01	< 10	< 10	117	< 10	2710	-----	-----
N113038	208	226	165	< 0.01	43	Intf*	26	< 2	12	14	< 0.01	< 10	< 10	181	< 10	2090	-----	-----
N113039	208	226	91	< 0.01	34	Intf*	14	< 2	10	1	< 0.01	< 10	< 10	98	< 10	3130	-----	-----
N113040	208	226	8	< 0.01	42	150	16	< 2	12	6	< 0.01	< 10	< 10	108	< 10	3970	-----	-----
N113041	208	226	22	< 0.01	29	Intf*	24	< 2	8	< 1	< 0.01	< 10	< 10	68	< 10	3310	-----	-----
N113042	208	226	3	< 0.01	45	150	10	< 2	13	3	< 0.01	< 10	< 10	96	< 10	1400	-----	-----
N113043	208	226	5	< 0.01	31	90	12	< 2	9	7	< 0.01	< 10	< 10	72	< 10	2680	-----	-----
N113044	208	226	< 1	0.03	41	390	< 2	< 2	27	19	< 0.01	< 10	< 10	225	< 10	418	-----	-----
N113045	208	226	< 1	0.02	53	260	< 2	< 2	27	47	< 0.01	< 10	< 10	172	< 10	242	-----	-----
N113046	208	226	15	< 0.01	12	30	6	< 2	3	29	< 0.01	< 10	< 10	26	< 10	94	-----	-----
N113047	208	226	11	0.01	31	170	8	< 2	10	36	< 0.01	< 10	< 10	62	< 10	94	-----	-----
N113048	208	226	4	0.01	76	280	6	< 2	13	28	< 0.01	< 10	< 10	90	< 10	104	-----	-----
N113049	208	226	< 1	0.01	56	340	2	< 2	25	62	< 0.01	< 10	< 10	134	< 10	106	-----	-----
N113050	208	226	2	< 0.01	28	40	6	< 2	11	22	< 0.01	< 10	< 10	93	< 10	102	-----	-----
N113051	208	226	4	< 0.01	30	60	< 2	< 2	10	18	< 0.01	< 10	< 10	87	< 10	138	-----	-----
N113052	208	226	7	< 0.01	35	120	2	< 2	8	33	< 0.01	< 10	< 10	68	< 10	192	-----	-----
N113053	208	226	< 1	0.01	72	370	< 2	< 2	29	45	< 0.01	< 10	< 10	203	< 10	452	-----	-----

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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

: EXPATRIATE RESOURCES LTD.
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Y1A 3S9

Project : ICE-ID97-13
Comments:

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Certificate Date: 10-JUL-97
Invoice No. :19730591
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730591

SAMPLE	PREP CODE		Au ppb FA+AA	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
N113054	208	226	-----	0.2	2.92	16	30	< 0.5	< 2	1.14	1.5	55	111	106	9.40	10	< 1	0.05	< 10	1.90	920
N113055	208	226	-----	< 0.2	0.87	788	70	< 0.5	< 2	8.08	0.5	33	48	266	9.19	< 10	2	0.03	< 10	3.32	1390
N113056	208	226	-----	< 0.2	1.33	74	130	< 0.5	< 2	>15.00	< 0.5	19	29	31	4.00	< 10	< 1	0.04	< 10	1.84	2430
N113057	208	226	-----	< 0.2	0.79	64	150	< 0.5	< 2	>15.00	< 0.5	13	30	23	3.53	< 10	1	0.04	< 10	5.13	1570
N113058	208	226	-----	< 0.2	1.44	< 2	160	< 0.5	< 2	11.15	< 0.5	15	73	50	3.69	< 10	< 1	0.11	< 10	3.04	1320
N113059	208	226	-----	< 0.2	1.45	< 2	60	< 0.5	< 2	14.40	< 0.5	15	47	28	4.35	< 10	1	0.07	< 10	3.03	2050
N113060	208	226	-----	< 0.2	1.75	8	100	< 0.5	< 2	12.10	< 0.5	19	52	69	4.44	< 10	1	0.13	< 10	2.84	1935
N113061	208	226	-----	< 0.2	3.08	6	200	< 0.5	< 2	1.48	< 0.5	37	107	92	6.17	< 10	< 1	0.13	< 10	2.40	725
N113062	208	226	-----	< 0.2	3.33	< 2	1420	< 0.5	< 2	2.47	< 0.5	29	92	96	5.26	10	< 1	0.05	< 10	2.63	885

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

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Y1A 3S9

Project : ICE-ID97-13
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Account : MPO

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CERTIFICATE OF ANALYSIS A9730591

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N113054	208	226	< 1	< 0.01	112	420	< 2	< 2	28	25	< 0.01	< 10	< 10	170	< 10	790	-----	-----
N113055	208	226	4	< 0.01	30	140	2	2	13	102	< 0.01	< 10	< 10	78	< 10	324	-----	-----
N113056	208	226	< 1	< 0.01	23	120	< 2	< 2	12	104	< 0.01	< 10	< 10	79	< 10	126	-----	-----
N113057	208	226	< 1	< 0.01	18	60	< 2	< 2	9	195	< 0.01	< 10	< 10	50	< 10	58	-----	-----
N113058	208	226	< 1	< 0.01	29	150	< 2	< 2	17	137	< 0.01	< 10	< 10	57	< 10	104	-----	-----
N113059	208	226	< 1	< 0.01	22	90	< 2	< 2	11	148	< 0.01	< 10	< 10	56	< 10	106	-----	-----
N113060	208	226	< 1	< 0.01	29	180	< 2	< 2	19	140	< 0.01	< 10	< 10	90	< 10	100	-----	-----
N113061	208	226	< 1	0.03	50	340	< 2	< 2	22	45	0.14	< 10	< 10	145	< 10	92	-----	-----
N113062	208	226	< 1	0.03	38	250	< 2	< 2	12	64	0.32	< 10	< 10	136	< 10	82	-----	-----

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

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Y1A 3S9

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SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N112990	208	226	90	4.53	10.6	0.85	6	< 10	< 0.5	Intf*	0.26	20.5	567	79	>10000	14.80	< 10	3	< 0.01	< 10	0.81
N112991	208	226	75	1.21	4.8	1.69	14	< 10	< 0.5	Intf*	0.72	5.0	351	67	>10000	>15.00	< 10	1	< 0.01	< 10	1.64
N112992	208	226	70	1.60	4.8	1.58	34	< 10	< 0.5	Intf*	0.94	3.5	391	59	>10000	>15.00	< 10	3	< 0.01	< 10	1.43
N112993	208	226	50	0.66	5.2	2.74	28	< 10	< 0.5	< 2	0.76	6.5	341	82	7000	>15.00	10	1	< 0.01	< 10	1.91

CERTIFICATION: Ian Bichlan

*INTERFERENCE: Cu ON Bi AND P.

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

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SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N112990	208	226	265	128	< 0.01	11	Intf*	44	< 2	4	3	< 0.01	< 10	< 10	17	< 10	6870
N112991	208	226	330	23	< 0.01	14	Intf*	22	< 2	8	6	0.01	< 10	< 10	48	< 10	2150
N112992	208	226	170	30	< 0.01	12	Intf*	30	< 2	6	8	0.01	< 10	< 10	32	< 10	1800
N112993	208	226	235	14	< 0.01	21	160	30	< 2	10	5	0.01	< 10	< 10	94	< 10	1525

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

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Invoice No. : I9730588
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CERTIFICATE OF ANALYSIS A9730588

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
N112963	208	226	3.4	1.15	8	10	< 0.5	< 2	2.03	0.5	96	136	4740	10.75	< 10	< 1	0.03	< 10	1.23	1355	3
N112964	208	226	< 0.2	4.02	< 2	80	< 0.5	12	3.48	< 0.5	27	36	85	6.01	10	< 1	0.02	< 10	1.88	980	< 1
N112965	208	226	< 0.2	3.30	< 2	100	< 0.5	4	2.70	< 0.5	27	29	98	5.72	10	< 1	0.09	< 10	1.75	945	< 1
N112966	208	226	0.2	3.60	< 2	110	< 0.5	< 2	3.33	< 0.5	31	40	78	6.27	10	< 1	0.13	< 10	2.13	1080	< 1
N112967	208	226	0.2	5.35	4	60	< 0.5	< 2	0.90	< 0.5	44	133	96	9.18	10	< 1	0.05	< 10	2.94	1085	< 1
N112968	208	226	2.4	0.31	12	40	< 0.5	< 2	0.81	1.0	59	178	341	9.86	< 10	< 1	0.01	< 10	0.27	385	4
N112969	208	226	6.8	0.21	18	10	< 0.5	< 2	0.70	0.5	146	109	1005	>15.00	< 10	< 1	< 0.01	< 10	0.22	300	8
N112970	208	226	25.0	0.04	72	< 10	< 0.5	< 2	0.95	13.0	415	114	2900	>15.00	< 10	< 1	< 0.01	< 10	0.29	225	32
N112971	208	226	28.8	0.03	64	< 10	< 0.5	Intf*	0.08	6.0	791	127	>10000	>15.00	< 10	< 1	< 0.01	< 10	0.04	40	43
N112972	208	226	3.0	2.76	2	< 10	< 0.5	< 2	0.08	12.0	285	117	2200	>15.00	10	< 1	0.04	< 10	1.52	200	6
N112973	208	226	2.0	0.83	10	< 10	< 0.5	< 2	0.08	5.5	284	133	1710	>15.00	< 10	< 1	< 0.01	< 10	0.46	105	7
N112974	208	226	3.0	1.34	8	< 10	< 0.5	< 2	0.05	7.0	348	89	3060	>15.00	< 10	< 1	< 0.01	< 10	0.78	120	15
N112975	208	226	6.8	0.41	12	< 10	< 0.5	< 2	0.08	21.0	453	119	4570	>15.00	< 10	< 1	< 0.01	< 10	0.26	60	18
N112976	208	226	3.6	0.42	8	< 10	< 0.5	< 2	0.11	3.5	380	88	4150	14.85	< 10	< 1	< 0.01	< 10	0.28	70	32
N112977	208	226	1.8	0.78	2	< 10	< 0.5	< 2	0.14	3.5	99	81	2360	>15.00	< 10	< 1	< 0.01	< 10	0.51	105	10
N112978	208	226	3.2	0.90	12	< 10	< 0.5	< 2	0.07	8.0	134	107	3920	14.35	< 10	< 1	< 0.01	< 10	0.60	90	11
N112979	208	226	1.0	1.52	4	< 10	< 0.5	< 2	0.05	2.0	109	104	2840	14.55	< 10	< 1	< 0.01	< 10	0.91	170	5
N112980	208	226	1.0	1.68	8	< 10	< 0.5	< 2	0.04	2.0	132	126	3530	13.65	< 10	< 1	< 0.01	< 10	0.98	195	7
N112981	208	226	0.8	1.64	46	10	< 0.5	< 2	0.08	1.0	118	122	4010	12.25	< 10	< 1	< 0.01	< 10	0.94	305	4
N112982	208	226	1.2	1.55	32	10	< 0.5	< 2	0.15	2.5	102	129	6560	12.00	< 10	1	< 0.01	< 10	0.95	395	6
N112983	208	226	1.0	1.36	14	10	< 0.5	< 2	0.14	4.0	114	150	3690	11.05	< 10	< 1	< 0.01	< 10	0.81	225	7
N112984	208	226	0.8	2.27	10	10	< 0.5	< 2	0.13	3.5	140	105	3620	14.40	10	< 1	< 0.01	< 10	1.28	295	7
N112985	208	226	1.0	2.69	10	10	< 0.5	< 2	0.24	2.0	155	106	2400	12.90	10	< 1	< 0.01	< 10	1.74	225	6
N112986	208	226	1.6	1.75	8	10	< 0.5	< 2	0.34	5.5	169	124	4260	11.75	< 10	< 1	< 0.01	< 10	1.14	160	17
N112987	208	226	0.6	2.08	2	< 10	< 0.5	< 2	0.16	1.0	134	83	2360	13.25	10	< 1	< 0.01	< 10	1.31	185	7
N112988	208	226	1.4	3.40	4	10	< 0.5	< 2	0.19	2.0	123	97	5150	13.55	10	< 1	< 0.01	< 10	2.12	265	5
N112989	208	226	2.4	2.99	6	10	< 0.5	Intf*	0.17	4.0	134	87	>10000	13.30	10	< 1	< 0.01	< 10	2.00	275	15
N112994	208	226	0.6	2.62	2	10	< 0.5	< 2	1.36	< 0.5	98	90	1090	>15.00	10	< 1	< 0.01	< 10	1.90	305	2
N112995	208	226	1.4	4.08	< 2	10	< 0.5	< 2	0.05	1.0	185	129	6210	>15.00	10	1	0.02	< 10	2.52	290	3
N112996	208	226	1.2	1.23	26	< 10	< 0.5	< 2	0.68	0.5	513	47	2040	>15.00	< 10	< 1	0.01	< 10	0.78	160	9
N112997	208	226	0.2	1.53	8	< 10	< 0.5	< 2	1.17	1.0	267	52	449	>15.00	< 10	< 1	< 0.01	< 10	1.00	125	1
N112998	208	226	0.2	0.88	8	< 10	< 0.5	< 2	0.99	< 0.5	490	31	538	>15.00	< 10	< 1	< 0.01	< 10	0.64	105	5
N112999	208	226	0.2	2.84	6	< 10	< 0.5	< 2	2.08	< 0.5	342	64	551	>15.00	10	< 1	< 0.01	< 10	1.95	255	6
N113000	208	226	0.2	5.25	8	< 10	< 0.5	< 2	0.45	< 0.5	129	133	430	>15.00	10	< 1	< 0.01	< 10	4.37	375	< 1
N113001	208	226	< 0.2	7.59	< 2	10	< 0.5	2	1.06	< 0.5	47	185	115	13.85	10	1	< 0.01	< 10	7.13	575	< 1
N113002	208	226	< 0.2	6.50	< 2	10	< 0.5	< 2	1.18	< 0.5	128	156	352	>15.00	20	1	< 0.01	< 10	4.88	615	< 1
N113003	208	226	0.4	3.74	< 2	10	< 0.5	< 2	1.09	0.5	120	91	131	>15.00	10	1	< 0.01	< 10	2.86	455	< 1
N113004	208	226	1.0	0.63	2	< 10	< 0.5	< 2	1.45	< 0.5	659	53	296	>15.00	< 10	< 1	< 0.01	< 10	1.09	185	4
N113005	208	226	0.2	2.45	8	< 10	< 0.5	< 2	1.12	< 0.5	386	79	242	>15.00	< 10	< 1	0.01	< 10	1.54	410	2
N113006	208	226	< 0.2	1.52	30	200	< 0.5	< 2	10.50	< 0.5	63	74	61	4.71	< 10	1	0.09	< 10	3.93	1285	< 1

CERTIFICATION: Stewart Buchler

* INTERFERENCES: Cu on Bi and P

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

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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
N112963	208	226	< 0.01	28	350	22	< 2	7	17	< 0.01	< 10	< 10	144	< 10	88
N112964	208	226	0.04	30	420	2	< 2	8	21	0.50	< 10	< 10	162	< 10	84
N112965	208	226	0.01	29	430	< 2	< 2	8	23	0.48	< 10	< 10	154	< 10	82
N112966	208	226	0.02	32	410	< 2	< 2	14	42	0.44	< 10	< 10	174	< 10	84
N112967	208	226	0.02	54	540	10	< 2	32	24	0.01	< 10	< 10	257	< 10	198
N112968	208	226	0.01	15	2090	100	< 2	1	6	0.01	< 10	< 10	169	< 10	688
N112969	208	226	< 0.01	18	1240	156	< 2	1	5	< 0.01	< 10	< 10	139	< 10	548
N112970	208	226	< 0.01	18	260	172	< 2	< 1	15	< 0.01	< 10	< 10	19	< 10	2300
N112971	208	226	< 0.01	10	Intf*	104	< 2	< 1	< 1	< 0.01	< 10	< 10	7	< 10	810
N112972	208	226	< 0.01	26	110	16	< 2	9	3	0.01	< 10	< 10	83	< 10	4730
N112973	208	226	< 0.01	13	80	24	< 2	3	< 1	0.01	< 10	< 10	29	< 10	3800
N112974	208	226	< 0.01	11	40	20	< 2	4	< 1	0.02	< 10	< 10	33	< 10	3230
N112975	208	226	< 0.01	7	50	40	< 2	1	< 1	< 0.01	< 10	< 10	14	< 10	7950
N112976	208	226	< 0.01	5	70	20	< 2	1	< 1	< 0.01	< 10	< 10	21	< 10	2860
N112977	208	226	< 0.01	8	300	14	< 2	3	< 1	0.01	< 10	< 10	37	< 10	3320
N112978	208	226	< 0.01	14	100	52	< 2	3	< 1	< 0.01	< 10	< 10	39	< 10	4700
N112979	208	226	< 0.01	13	50	12	< 2	6	< 1	0.01	< 10	< 10	64	< 10	1545
N112980	208	226	< 0.01	12	40	10	< 2	6	< 1	0.02	< 10	< 10	66	< 10	710
N112981	208	226	< 0.01	13	50	10	2	6	1	0.01	< 10	< 10	71	< 10	436
N112982	208	226	< 0.01	12	40	6	< 2	7	1	0.01	< 10	< 10	71	< 10	618
N112983	208	226	< 0.01	13	50	12	< 2	6	1	0.02	< 10	< 10	54	< 10	1330
N112984	208	226	< 0.01	17	< 10	12	< 2	9	1	0.03	< 10	< 10	84	< 10	826
N112985	208	226	< 0.01	20	200	8	< 2	10	1	0.03	< 10	< 10	84	< 10	954
N112986	208	226	< 0.01	15	90	14	< 2	7	4	0.04	< 10	< 10	58	< 10	2390
N112987	208	226	< 0.01	15	190	8	< 2	9	3	0.04	< 10	< 10	74	< 10	494
N112988	208	226	< 0.01	24	180	10	< 2	14	1	0.04	< 10	< 10	117	< 10	720
N112989	208	226	< 0.01	20	Intf*	8	< 2	12	1	0.03	< 10	< 10	107	< 10	1190
N112994	208	226	< 0.01	20	10	12	< 2	8	8	0.02	< 10	< 10	85	< 10	292
N112995	208	226	< 0.01	29	10	8	< 2	11	1	0.01	< 10	< 10	117	< 10	458
N112996	208	226	< 0.01	12	< 10	16	< 2	4	4	< 0.01	< 10	< 10	45	< 10	132
N112997	208	226	< 0.01	11	10	8	< 2	5	6	0.01	< 10	< 10	49	< 10	312
N112998	208	226	< 0.01	9	< 10	12	< 2	3	4	< 0.01	< 10	< 10	31	< 10	52
N112999	208	226	< 0.01	20	< 10	6	< 2	10	12	0.02	< 10	< 10	96	< 10	80
N113000	208	226	< 0.01	34	140	10	2	20	6	0.04	< 10	< 10	203	< 10	108
N113001	208	226	< 0.01	50	350	6	< 2	30	18	0.03	< 10	< 10	196	< 10	282
N113002	208	226	< 0.01	43	140	6	< 2	24	13	0.01	< 10	< 10	208	< 10	110
N113003	208	226	< 0.01	23	30	6	2	13	20	0.01	< 10	< 10	124	< 10	54
N113004	208	226	< 0.01	11	< 10	10	< 2	3	18	< 0.01	< 10	< 10	29	< 10	34
N113005	208	226	0.01	22	50	10	< 2	12	13	< 0.01	< 10	< 10	102	< 10	92
N113006	208	226	< 0.01	93	220	< 2	< 2	19	143	< 0.01	< 10	< 10	75	< 10	96

CERTIFICATION: Stewart Bachler

*INTERFERENCES: Cu on Bi and P

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

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Y1A 3S9

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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730588

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
N113007	208	226	< 0.2	0.55	218	220	< 0.5	2	14.15	< 0.5	22	19	37	4.34	< 10	2	0.03	< 10	5.93	1375	< 1
N113008	208	226	< 0.2	0.64	1340	110	< 0.5	< 2	11.65	< 0.5	20	30	35	6.00	< 10	4	0.03	< 10	4.95	1255	1
N113009	208	226	< 0.2	2.24	372	230	< 0.5	< 2	8.65	< 0.5	26	49	69	5.34	< 10	3	0.10	< 10	3.17	1395	< 1
N113010	208	226	< 0.2	1.24	366	110	< 0.5	< 2	10.60	< 0.5	18	38	32	7.95	< 10	3	0.04	< 10	3.51	1735	< 1
N113011	208	226	< 0.2	3.19	28	430	< 0.5	< 2	4.15	< 0.5	25	118	85	5.98	< 10	1	0.08	< 10	1.82	995	< 1
N113012	208	226	< 0.2	2.33	10	750	< 0.5	< 2	2.28	< 0.5	24	137	52	5.06	< 10	< 1	0.11	< 10	1.18	620	< 1
N113013	208	226	< 0.2	3.57	< 2	780	< 0.5	< 2	2.68	< 0.5	27	145	90	6.96	< 10	< 1	0.11	< 10	2.18	965	< 1

CERTIFICATION: David Bichler

* INTERFERENCES: Cu on Bi and P

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

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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
N113007	208	226	< 0.01	19	30	10	2	8	164	< 0.01	< 10	< 10	43	< 10	56
N113008	208	226	< 0.01	30	120	8	14	12	177	< 0.01	< 10	< 10	55	< 10	46
N113009	208	226	< 0.01	55	450	6	2	26	119	< 0.01	< 10	< 10	128	< 10	82
N113010	208	226	< 0.01	25	210	6	< 2	14	112	< 0.01	< 10	< 10	71	< 10	66
N113011	208	226	0.02	50	300	< 2	< 2	24	139	0.08	< 10	< 10	144	< 10	86
N113012	208	226	0.03	57	280	< 2	< 2	20	52	< 0.01	< 10	< 10	110	< 10	64
N113013	208	226	0.02	56	330	< 2	< 2	26	71	0.05	< 10	< 10	149	< 10	84

CERTIFICATION: Ian Bichler

* INTERFERENCES: Cu on Bi and P

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

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Y1A 3S9

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Comments:

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Total Pages :2
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Account :MPO

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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
N112915	208	226	< 0.2	3.37	< 2	110	< 0.5	< 2	2.90	< 0.5	24	123	173	4.81	10	< 1	0.07	< 10	2.34	945	< 1
N112916	208	226	< 0.2	4.13	< 2	270	< 0.5	< 2	2.78	< 0.5	31	145	183	6.36	10	< 1	0.13	< 10	3.13	1390	< 1
N112917	208	226	0.2	4.60	< 2	180	< 0.5	< 2	2.66	0.5	34	195	273	8.59	10	< 1	0.06	< 10	3.81	1445	< 1
N112918	208	226	8.8	3.54	14	< 10	< 0.5	Intf*	1.05	4.5	182	112	>10000	14.55	10	< 1	0.01	< 10	2.63	760	33
N112919	208	226	< 0.2	3.96	< 2	100	< 0.5	< 2	3.05	< 0.5	29	88	100	6.21	10	< 1	0.07	< 10	2.95	885	< 1
N112920	208	226	0.4	3.90	< 2	50	< 0.5	< 2	2.78	< 0.5	35	87	1510	6.05	10	< 1	0.06	< 10	2.81	890	< 1
N112921	208	226	< 0.2	3.22	< 2	60	< 0.5	< 2	3.07	< 0.5	26	68	73	5.20	10	< 1	0.05	< 10	2.46	835	< 1
N112922	208	226	< 0.2	6.18	< 2	160	< 0.5	< 2	1.79	< 0.5	50	172	408	9.98	10	1	0.06	< 10	5.44	1255	< 1
N112923	208	226	< 0.2	2.45	< 2	200	< 0.5	< 2	2.16	< 0.5	27	17	83	6.19	10	< 1	0.09	< 10	1.96	700	< 1
N112924	208	226	< 0.2	2.53	< 2	300	< 0.5	< 2	2.00	< 0.5	27	17	112	6.86	10	< 1	0.08	< 10	1.87	740	< 1
N112925	208	226	3.6	2.72	10	10	< 0.5	< 2	1.34	8.0	201	92	2880	12.05	10	< 1	0.05	< 10	1.76	550	25
N112926	208	226	3.4	3.00	8	10	< 0.5	< 2	0.94	9.0	204	99	3630	13.05	10	< 1	< 0.01	< 10	1.75	365	24
N112927	208	226	4.0	2.89	14	< 10	< 0.5	< 2	0.42	15.0	194	96	8400	13.00	10	< 1	0.01	< 10	1.71	285	33
N112928	208	226	2.8	2.56	14	< 10	< 0.5	< 2	0.49	12.5	200	82	6290	14.90	< 10	< 1	< 0.01	< 10	1.40	225	25
N112929	208	226	4.4	2.38	22	< 10	< 0.5	< 2	0.32	33.5	395	91	7900	14.40	< 10	< 1	0.01	< 10	1.38	200	40
N112930	208	226	4.0	3.00	16	< 10	< 0.5	< 2	0.71	16.0	223	88	4890	14.55	10	< 1	< 0.01	< 10	1.95	245	20
N112931	208	226	3.8	2.92	12	< 10	< 0.5	< 2	0.17	10.0	160	102	3850	>15.00	10	< 1	< 0.01	< 10	1.96	185	13
N112932	208	226	4.0	2.73	16	< 10	< 0.5	< 2	0.38	12.5	181	82	2370	>15.00	10	< 1	< 0.01	< 10	1.87	185	12
N112933	208	226	0.8	0.89	< 2	< 10	< 0.5	< 2	0.10	2.0	166	45	254	>15.00	10	< 1	< 0.01	< 10	0.58	100	2
N112934	208	226	2.2	2.90	4	< 10	< 0.5	< 2	0.46	1.5	124	78	2190	14.25	10	1	< 0.01	< 10	2.09	165	3
N112935	208	226	1.6	2.70	6	< 10	< 0.5	< 2	0.14	1.5	313	71	1900	>15.00	< 10	< 1	< 0.01	< 10	1.72	150	2
N112936	208	226	0.6	2.81	8	< 10	< 0.5	< 2	0.07	6.0	287	70	597	>15.00	< 10	< 1	< 0.01	< 10	1.74	145	5
N112937	208	226	1.0	3.39	< 2	< 10	< 0.5	< 2	0.37	3.5	322	86	223	>15.00	< 10	< 1	0.03	< 10	1.97	190	4
N112938	208	226	0.4	5.18	< 2	10	< 0.5	< 2	0.28	2.5	152	133	335	>15.00	10	1	0.01	< 10	3.17	275	< 1
N112939	208	226	0.4	5.21	6	10	< 0.5	< 2	0.25	2.5	155	144	720	>15.00	10	< 1	< 0.01	< 10	3.28	305	< 1
N112940	208	226	1.0	3.95	< 2	< 10	< 0.5	< 2	0.16	9.0	191	128	456	>15.00	10	< 1	< 0.01	< 10	2.23	200	1
N112941	208	226	0.2	4.45	< 2	< 10	< 0.5	< 2	0.28	< 0.5	176	175	470	>15.00	10	1	0.02	< 10	2.61	245	< 1
N112942	208	226	2.2	3.85	4	< 10	< 0.5	< 2	0.33	5.0	178	129	848	12.85	10	< 1	0.01	< 10	2.50	235	1
N112943	208	226	0.2	4.84	< 2	< 10	< 0.5	< 2	0.36	0.5	378	157	47	14.95	10	< 1	< 0.01	< 10	3.39	315	< 1
N112944	208	226	0.6	4.00	2	< 10	< 0.5	< 2	0.40	2.0	508	124	66	>15.00	10	< 1	< 0.01	< 10	2.71	285	< 1
N112945	208	226	0.2	5.01	2	< 10	< 0.5	< 2	0.22	0.5	388	129	57	>15.00	10	1	< 0.01	< 10	3.22	295	< 1
N112946	208	226	< 0.2	4.81	< 2	< 10	< 0.5	< 2	1.60	< 0.5	270	155	52	14.60	10	< 1	0.01	< 10	3.08	390	< 1
N112947	208	226	< 0.2	4.69	2	< 10	< 0.5	< 2	0.13	1.5	298	165	209	>15.00	10	1	0.01	< 10	2.97	345	< 1
N112948	208	226	0.4	5.68	< 2	< 10	< 0.5	< 2	0.27	1.0	171	209	2040	14.65	10	1	0.02	< 10	3.67	460	< 1
N112949	208	226	1.2	6.15	< 2	< 10	< 0.5	< 2	0.34	2.0	126	229	9140	14.50	10	1	0.04	< 10	3.52	450	2
N112950	208	226	1.0	5.77	6	10	< 0.5	< 2	0.22	3.0	99	224	6060	14.00	10	< 1	0.04	< 10	3.57	560	1
N112951	208	226	0.6	6.46	< 2	10	< 0.5	< 2	0.26	0.5	58	244	2630	13.15	10	< 1	0.05	< 10	4.32	930	< 1
N112952	208	226	1.0	5.46	< 2	10	< 0.5	< 2	0.62	0.5	94	227	5640	12.75	10	< 1	0.07	< 10	3.67	980	1
N112953	208	226	0.2	5.28	< 2	370	< 0.5	2	3.27	2.0	37	219	789	8.42	10	< 1	0.06	< 10	4.24	1355	< 1
N112954	208	226	0.2	4.78	< 2	270	< 0.5	< 2	3.75	< 0.5	36	161	187	7.24	10	< 1	0.01	< 10	3.36	1305	< 1

CERTIFICATION: Stuart Buchler

* INTERFERENCES: Cu on Bi and P

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

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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
N112915	208	226	0.05	44	240	< 2	< 2	9	16	0.25	< 10	< 10	156	< 10	194
N112916	208	226	0.04	56	310	< 2	< 2	13	26	0.35	< 10	< 10	132	< 10	680
N112917	208	226	0.02	63	270	< 2	< 2	19	40	0.26	< 10	< 10	170	< 10	1000
N112918	208	226	< 0.01	34	Intf*	10	< 2	12	9	0.01	< 10	< 10	103	< 10	1075
N112919	208	226	0.03	46	320	< 2	< 2	14	26	0.31	< 10	< 10	139	< 10	156
N112920	208	226	0.04	39	290	< 2	< 2	11	17	0.33	< 10	< 10	144	< 10	136
N112921	208	226	0.03	33	330	< 2	< 2	10	23	0.35	< 10	< 10	149	< 10	80
N112922	208	226	0.01	56	350	2	< 2	23	22	0.06	< 10	< 10	168	< 10	280
N112923	208	226	0.04	5	420	< 2	< 2	12	54	0.47	< 10	< 10	194	< 10	88
N112924	208	226	0.07	7	400	< 2	< 2	13	31	0.41	< 10	< 10	234	< 10	118
N112925	208	226	0.01	20	120	28	< 2	9	10	0.04	< 10	< 10	104	< 10	1835
N112926	208	226	< 0.01	26	< 10	38	< 2	11	4	0.05	< 10	< 10	92	< 10	3680
N112927	208	226	< 0.01	23	50	38	< 2	10	2	0.04	< 10	< 10	82	< 10	5030
N112928	208	226	< 0.01	21	60	30	< 2	9	1	0.03	< 10	< 10	83	< 10	4520
N112929	208	226	< 0.01	19	50	28	< 2	8	< 1	0.02	< 10	< 10	77	< 10	>10000
N112930	208	226	< 0.01	23	110	32	< 2	11	2	0.03	< 10	< 10	88	< 10	5440
N112931	208	226	< 0.01	25	120	28	< 2	11	< 1	0.04	< 10	< 10	86	< 10	4230
N112932	208	226	< 0.01	29	310	44	< 2	10	1	0.05	< 10	< 10	76	< 10	4400
N112933	208	226	< 0.01	11	40	16	< 2	3	< 1	0.01	< 10	< 10	31	< 10	1010
N112934	208	226	< 0.01	27	30	12	< 2	10	3	0.03	< 10	< 10	58	< 10	912
N112935	208	226	< 0.01	20	< 10	10	< 2	10	< 1	< 0.01	< 10	< 10	85	< 10	640
N112936	208	226	< 0.01	19	< 10	12	< 2	10	< 1	< 0.01	< 10	< 10	93	< 10	1795
N112937	208	226	< 0.01	22	10	14	2	12	3	< 0.01	< 10	< 10	110	< 10	8700
N112938	208	226	< 0.01	37	90	8	< 2	20	3	0.01	< 10	< 10	169	< 10	578
N112939	208	226	< 0.01	37	90	6	2	20	1	< 0.01	< 10	< 10	177	< 10	1040
N112940	208	226	< 0.01	29	30	16	< 2	13	1	< 0.01	< 10	< 10	126	< 10	6240
N112941	208	226	< 0.01	36	< 10	10	< 2	14	4	< 0.01	< 10	< 10	123	< 10	294
N112942	208	226	< 0.01	29	10	20	< 2	13	4	< 0.01	< 10	< 10	110	< 10	3170
N112943	208	226	< 0.01	34	< 10	10	4	16	3	< 0.01	< 10	< 10	127	< 10	228
N112944	208	226	< 0.01	27	50	8	< 2	13	5	< 0.01	< 10	< 10	114	< 10	770
N112945	208	226	< 0.01	36	80	4	< 2	17	3	< 0.01	< 10	< 10	147	< 10	322
N112946	208	226	< 0.01	33	50	6	2	17	14	< 0.01	< 10	< 10	132	< 10	240
N112947	208	226	< 0.01	31	50	6	< 2	15	1	< 0.01	< 10	< 10	134	< 10	608
N112948	208	226	< 0.01	40	130	6	< 2	20	4	< 0.01	< 10	< 10	167	< 10	564
N112949	208	226	< 0.01	64	210	6	< 2	19	5	< 0.01	< 10	< 10	188	< 10	460
N112950	208	226	< 0.01	64	220	6	< 2	18	4	0.06	< 10	< 10	176	< 10	1230
N112951	208	226	< 0.01	53	230	4	< 2	20	5	< 0.01	< 10	< 10	186	< 10	266
N112952	208	226	< 0.01	46	200	4	< 2	19	13	< 0.01	< 10	< 10	162	< 10	286
N112953	208	226	< 0.01	50	250	4	< 2	21	41	0.21	< 10	< 10	180	< 10	698
N112954	208	226	0.03	53	330	< 2	< 2	25	57	0.33	< 10	< 10	200	< 10	188

CERTIFICATION: Ian Bradley

* INTERFERENCES: Cu on Bi and P

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

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

Project : ICE-ID97-11
Comments:

Certificate Date: 08-JUL-97
Invoice No. : I9730586
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730586

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
N112955	208	226	< 0.2	3.75	< 2	40	< 0.5	< 2	3.47	< 0.5	26	67	139	5.95	< 10	< 1	0.01	< 10	3.14	1325	< 1
N112956	208	226	< 0.2	3.11	< 2	50	< 0.5	< 2	3.07	< 0.5	23	38	93	5.40	< 10	< 1	0.03	< 10	2.02	800	< 1
N112957	208	226	< 0.2	3.76	< 2	20	< 0.5	< 2	2.85	< 0.5	27	48	91	6.43	< 10	< 1	< 0.01	< 10	2.59	990	< 1
N112958	208	226	< 0.2	3.48	< 2	50	< 0.5	< 2	4.48	< 0.5	27	60	79	7.04	< 10	< 1	0.06	< 10	2.11	1120	< 1
N112959	208	226	0.8	1.87	< 2	570	< 0.5	< 2	5.91	< 0.5	14	107	1180	5.86	< 10	< 1	0.10	< 10	1.14	940	< 1
N112960	208	226	< 0.2	3.67	< 2	30	< 0.5	< 2	4.66	< 0.5	26	19	70	6.33	< 10	< 1	< 0.01	< 10	2.03	1000	< 1
N112961	208	226	< 0.2	3.45	2	110	< 0.5	< 2	2.47	< 0.5	26	15	89	6.95	< 10	< 1	0.04	< 10	2.04	955	1
N112962	208	226	< 0.2	2.81	2	180	< 0.5	< 2	1.90	< 0.5	24	11	69	6.24	< 10	< 1	0.06	< 10	1.68	860	< 1

CERTIFICATION: Ian Buchler

* INTERFERENCES: Cu on Bi and P

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PHONE: 604-984-0221 FAX: 604-984-0218

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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730586

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
N112955	208	226	0.01	37	310	< 2	2	14	48	0.35	< 10	< 10	152	< 10	86
N112956	208	226	0.01	33	440	< 2	< 2	7	23	0.43	< 10	< 10	142	< 10	84
N112957	208	226	< 0.01	38	530	< 2	2	7	27	0.51	< 10	< 10	160	< 10	94
N112958	208	226	< 0.01	44	510	< 2	2	12	21	0.46	< 10	< 10	182	< 10	122
N112959	208	226	< 0.01	16	500	10	2	9	32	0.20	< 10	< 10	125	< 10	84
N112960	208	226	< 0.01	21	590	< 2	2	15	83	0.58	< 10	< 10	203	< 10	98
N112961	208	226	< 0.01	17	610	< 2	2	8	22	0.52	< 10	< 10	189	< 10	96
N112962	208	226	0.01	16	620	< 2	2	6	37	0.56	< 10	< 10	164	< 10	90

CERTIFICATION: Ian Bichler

* INTERFERENCES: Cu on Bi and P

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

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C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Y1A 3S9

Project : ICE-ID-97-11
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Invoice No. : I9730514
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CERTIFICATE OF ANALYSIS A9730514

SAMPLE	PREP CODE	Cu %									
N112912	244 --	2.77									

CERTIFICATION:

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PHONE: 604-984-0221 FAX: 604-984-0218

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-ID97-07
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CERTIFICATE OF ANALYSIS A9730229

SAMPLE	PREP CODE	Au ppb FA+AA	Cu %
N112802	244 --	145	1.07
N112806	244 --	190	1.00
N112807	244 --	350	1.49
N112819	244 --	620	7.42
N112828	244 --	40	0.91
N112829	244 --	25	0.31
N112830	244 --	160	1.64
N112831	244 --	25	0.09
N112832	244 --	20	0.16
N112833	244 --	70	0.91
N112834	244 --	70	0.19
N112835	244 --	15	0.11
N112836	244 --	35	0.29
N112837	244 --	60	0.98
N112838	244 --	60	0.37
N112839	244 --	40	0.66
N112840	244 --	130	0.29
N112841	244 --	65	0.15
N112842	244 --	40	0.24
N112843	244 --	20	0.89

CERTIFICATION:

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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 : ICE-ID97-09
Comments:

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Certificate Date: 05-JUL-97
Invoice No. : 19729930
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9729930

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
N112851	205	294	< 0.2	0.59	< 2	130	< 0.5	< 2	1.48	< 0.5	5	47	62	1.96	< 10	1	0.07	< 10	0.84	1240	< 1
N112852	205	294	< 0.2	0.95	2	170	< 0.5	< 2	0.70	< 0.5	7	45	68	2.50	< 10	< 1	0.10	< 10	0.71	720	< 1
N112853	205	294	< 0.2	0.82	2	230	< 0.5	< 2	1.93	< 0.5	11	67	38	3.57	< 10	< 1	0.16	< 10	1.19	950	< 1
N112854	205	294	0.2	0.86	26	210	< 0.5	< 2	2.30	< 0.5	17	63	42	4.31	< 10	< 1	0.16	< 10	1.35	1380	2
N112855	205	294	< 0.2	1.03	< 2	190	< 0.5	< 2	1.29	< 0.5	8	80	51	2.75	< 10	< 1	0.12	< 10	0.95	1055	< 1
N112856	205	294	< 0.2	1.05	8	270	< 0.5	< 2	1.36	< 0.5	10	77	47	3.27	< 10	1	0.18	< 10	1.04	1480	< 1
N112857	205	294	< 0.2	1.20	12	300	< 0.5	< 2	1.43	< 0.5	11	84	41	3.02	< 10	< 1	0.17	< 10	1.05	1340	< 1
N112858	205	294	< 0.2	1.03	4	260	< 0.5	< 2	1.18	< 0.5	9	87	44	2.52	< 10	1	0.12	< 10	0.89	1195	1
N112859	205	294	< 0.2	3.67	< 2	110	< 0.5	< 2	3.29	< 0.5	24	68	84	7.03	< 10	< 1	0.06	< 10	2.82	2850	< 1
N112860	205	294	< 0.2	1.12	6	190	< 0.5	< 2	1.35	< 0.5	9	64	47	2.68	< 10	< 1	0.11	< 10	0.90	1545	< 1
N112861	205	294	< 0.2	0.61	4	350	< 0.5	< 2	0.48	< 0.5	7	71	75	1.54	< 10	< 1	0.10	< 10	0.44	1640	< 1
N112862	205	294	< 0.2	0.99	< 2	560	< 0.5	< 2	0.44	< 0.5	7	68	84	1.73	< 10	< 1	0.08	< 10	0.70	1430	1
N112863	205	294	< 0.2	0.86	2	380	< 0.5	< 2	0.65	< 0.5	8	77	108	1.49	< 10	< 1	0.08	< 10	0.72	2370	< 1
N112864	205	294	< 0.2	0.99	< 2	630	< 0.5	< 2	0.28	< 0.5	10	83	74	1.71	< 10	< 1	0.10	< 10	0.57	930	< 1
N112865	205	294	< 0.2	1.05	< 2	840	< 0.5	< 2	0.36	< 0.5	9	83	41	1.68	< 10	1	0.09	10	0.64	815	< 1
N112866	205	294	< 0.2	4.01	< 2	1880	< 0.5	< 2	3.18	< 0.5	28	43	80	6.18	10	< 1	0.01	< 10	3.73	2090	< 1
N112867	205	294	< 0.2	0.99	< 2	350	< 0.5	< 2	1.24	< 0.5	8	51	61	1.93	< 10	< 1	0.10	< 10	0.71	1130	3
N112868	205	294	< 0.2	1.01	6	240	< 0.5	< 2	0.64	< 0.5	8	52	82	1.87	< 10	< 1	0.07	< 10	0.62	1020	< 1
N112869	205	294	< 0.2	0.77	6	220	< 0.5	< 2	1.43	< 0.5	6	54	66	2.14	< 10	< 1	0.07	< 10	0.81	1565	1
N112870	205	294	0.2	0.91	< 2	240	< 0.5	< 2	1.04	< 0.5	6	80	98	1.64	< 10	1	0.09	< 10	0.60	1085	< 1
N112871	205	294	< 0.2	1.65	< 2	350	< 0.5	< 2	2.46	< 0.5	10	68	104	3.23	< 10	< 1	0.12	10	0.70	2160	< 1
N112872	205	294	< 0.2	3.26	< 2	40	< 0.5	2	2.47	< 0.5	25	32	80	6.25	10	< 1	0.01	< 10	1.87	785	< 1
N112873	205	294	< 0.2	3.03	< 2	50	< 0.5	< 2	2.66	< 0.5	22	24	81	4.62	< 10	< 1	0.05	< 10	1.47	775	< 1
N112874	205	294	< 0.2	3.38	< 2	50	< 0.5	2	2.72	< 0.5	23	30	91	5.16	10	< 1	0.03	< 10	1.77	840	< 1
N112875	205	294	2.2	0.81	10	30	< 0.5	< 2	2.11	16.0	93	72	6970	8.92	< 10	7	0.06	< 10	0.40	535	4
N112876	205	294	< 0.2	2.69	< 2	40	< 0.5	2	1.86	< 0.5	31	9	78	7.85	10	< 1	0.01	< 10	1.91	1125	< 1
N112877	205	294	0.2	2.61	2	40	< 0.5	2	2.01	< 0.5	30	11	79	7.63	10	< 1	0.02	< 10	1.67	1095	< 1
N112878	205	294	0.2	2.68	< 2	50	< 0.5	2	2.15	< 0.5	26	8	83	8.28	10	< 1	0.03	< 10	1.74	1080	< 1
N112879	205	294	< 0.2	2.75	< 2	70	< 0.5	4	2.09	< 0.5	29	7	66	7.56	10	< 1	0.06	< 10	1.68	1060	< 1
N112880	205	294	< 0.2	2.70	2	70	< 0.5	6	2.12	< 0.5	31	8	73	7.81	10	1	0.07	< 10	1.96	995	< 1
N112881	205	294	10.4	0.92	14	10	< 0.5	Intf*	1.17	7.0	371	42	>10000	>15.00	10	5	0.06	< 10	0.75	980	13
N112882	205	294	< 0.2	2.55	< 2	60	0.5	2	2.44	< 0.5	30	9	206	8.37	10	< 1	< 0.01	< 10	2.01	1085	< 1
N112883	205	294	< 0.2	2.45	< 2	120	< 0.5	2	1.79	< 0.5	28	11	108	8.34	10	< 1	< 0.01	< 10	1.93	1215	< 1
N112884	205	294	< 0.2	3.04	< 2	100	< 0.5	2	2.38	< 0.5	29	9	63	8.17	10	< 1	0.01	< 10	2.16	1250	< 1

CERTIFICATION: David Schiller

* INTERFERENCES: Cu on Bi and P

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

Project : ICE-ID97-09
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Total Pages : 1
Certificate Date: 05-JUL-97
Invoice No. : I9729930
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Account : MPO

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CERTIFICATE OF ANALYSIS A9729930

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
N112851	205	294	< 0.01	19	120	8	< 2	3	91	< 0.01	< 10	< 10	13	< 10	58
N112852	205	294	< 0.01	27	250	10	< 2	3	41	< 0.01	< 10	< 10	17	< 10	76
N112853	205	294	< 0.01	40	750	10	< 2	5	77	< 0.01	< 10	< 10	27	< 10	110
N112854	205	294	< 0.01	53	780	26	< 2	6	112	< 0.01	< 10	< 10	30	< 10	140
N112855	205	294	< 0.01	31	370	10	< 2	4	79	< 0.01	< 10	< 10	18	< 10	78
N112856	205	294	< 0.01	35	750	14	< 2	5	68	< 0.01	< 10	< 10	28	< 10	102
N112857	205	294	< 0.01	39	740	12	< 2	5	69	< 0.01	< 10	< 10	31	< 10	106
N112858	205	294	< 0.01	35	490	14	< 2	4	62	< 0.01	< 10	< 10	21	< 10	84
N112859	205	294	< 0.01	20	150	2	6	22	318	< 0.01	< 10	< 10	106	< 10	84
N112860	205	294	< 0.01	33	690	14	2	4	64	< 0.01	< 10	< 10	23	< 10	98
N112861	205	294	< 0.01	26	140	4	< 2	2	33	< 0.01	< 10	< 10	11	< 10	60
N112862	205	294	< 0.01	28	180	6	< 2	2	35	< 0.01	< 10	< 10	13	< 10	60
N112863	205	294	< 0.01	25	220	10	< 2	2	51	< 0.01	< 10	< 10	12	< 10	52
N112864	205	294	< 0.01	26	180	4	< 2	1	22	< 0.01	< 10	< 10	13	< 10	52
N112865	205	294	< 0.01	26	230	10	< 2	2	16	< 0.01	< 10	< 10	17	< 10	50
N112866	205	294	0.02	17	130	< 2	4	29	214	< 0.01	< 10	< 10	203	< 10	64
N112867	205	294	< 0.01	24	110	6	< 2	3	55	< 0.01	< 10	< 10	22	< 10	62
N112868	205	294	< 0.01	27	170	4	< 2	1	24	< 0.01	< 10	< 10	14	< 10	58
N112869	205	294	< 0.01	29	140	8	< 2	3	29	< 0.01	< 10	< 10	15	< 10	106
N112870	205	294	< 0.01	30	220	10	< 2	1	22	< 0.01	< 10	< 10	16	< 10	66
N112871	205	294	< 0.01	37	1990	12	< 2	4	34	< 0.01	< 10	< 10	75	< 10	68
N112872	205	294	< 0.01	29	620	< 2	4	6	17	0.53	< 10	< 10	189	< 10	82
N112873	205	294	0.01	34	380	< 2	< 2	4	13	0.39	< 10	< 10	118	< 10	68
N112874	205	294	0.01	34	410	< 2	< 2	5	14	0.39	< 10	< 10	130	< 10	84
N112875	205	294	0.01	12	1220	82	< 2	1	36	0.03	< 10	< 10	99	< 10	8190
N112876	205	294	< 0.01	20	740	< 2	2	6	15	0.69	< 10	< 10	253	< 10	142
N112877	205	294	< 0.01	19	750	< 2	2	6	15	0.72	< 10	< 10	247	< 10	112
N112878	205	294	< 0.01	18	740	< 2	2	6	17	0.71	< 10	< 10	230	< 10	102
N112879	205	294	< 0.01	17	720	< 2	2	6	18	0.71	< 10	< 10	221	< 10	100
N112880	205	294	< 0.01	19	740	< 2	< 2	7	22	0.73	< 10	< 10	231	< 10	124
N112881	205	294	0.01	11	Intf*	46	8	4	57	0.14	< 10	< 10	165	< 10	4140
N112882	205	294	< 0.01	19	740	< 2	< 2	9	20	0.57	< 10	< 10	246	< 10	112
N112883	205	294	< 0.01	18	710	< 2	2	7	22	0.51	< 10	< 10	214	< 10	114
N112884	205	294	< 0.01	18	700	< 2	< 2	10	26	0.58	< 10	< 10	224	< 10	110

CERTIFICATION:

*INTERFERENCES: Cu on Bi and P

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

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

Project : ICE-ID97-10
Comments:

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Total :1
Certificate Date: 05-JUL-97
Invoice No. :I9729928
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9729928

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
N112893	205	226	< 0.2	2.38	< 2	70	< 0.5	< 2	1.20	< 0.5	27	22	66	6.03	10	< 1	0.09	< 10	1.65	735	< 1
N112894	205	226	< 0.2	2.81	< 2	30	< 0.5	2	1.45	< 0.5	29	27	242	6.57	10	< 1	0.03	< 10	1.94	830	< 1
N112895	205	226	< 0.2	2.78	< 2	190	< 0.5	2	2.37	< 0.5	26	72	84	5.37	10	< 1	0.05	< 10	2.06	945	< 1
N112896	205	226	2.8	1.17	2	50	< 0.5	< 2	1.44	2.0	75	71	6780	11.60	10	1	0.05	< 10	0.71	575	1
N112897	205	226	< 0.2	2.76	< 2	30	< 0.5	< 2	2.01	< 0.5	31	16	323	7.25	10	< 1	0.03	< 10	1.73	1330	< 1
N112898	205	226	< 0.2	2.61	< 2	30	< 0.5	2	2.27	< 0.5	24	18	61	7.87	10	< 1	0.03	< 10	1.47	1305	< 1
N112899	205	226	< 0.2	2.10	< 2	20	< 0.5	< 2	1.92	< 0.5	24	15	80	7.84	10	< 1	0.01	< 10	1.53	1315	< 1
N112900	205	226	< 0.2	2.22	< 2	40	< 0.5	< 2	1.77	< 0.5	27	14	45	7.66	10	< 1	0.03	< 10	1.63	1455	< 1
N112901	205	226	< 0.2	2.55	< 2	40	< 0.5	< 2	1.96	< 0.5	27	17	98	7.75	10	< 1	0.02	< 10	1.82	1375	< 1
N112902	205	226	0.8	3.06	< 2	50	< 0.5	< 2	1.80	0.5	54	144	2950	7.63	10	< 1	0.12	< 10	2.28	1445	< 1
N112903	205	226	< 0.2	3.30	< 2	60	< 0.5	< 2	2.76	< 0.5	24	77	210	3.44	10	1	0.19	< 10	1.80	705	< 1
N112904	205	226	< 0.2	3.59	< 2	50	< 0.5	< 2	2.90	< 0.5	30	114	337	4.05	10	< 1	0.10	< 10	2.04	730	< 1

CERTIFICATION: Ian Bichler

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.
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Y1A 3S9

Project : ICE-ID97-10
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Invoice No. : I9729928
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Account : MPO

CERTIFICATE OF ANALYSIS A9729928

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
N112893	205	226	< 0.01	24	640	< 2	< 2	4	20	0.46	< 10	< 10	138	< 10	88
N112894	205	226	< 0.01	27	670	< 2	< 2	4	15	0.54	< 10	< 10	174	< 10	90
N112895	205	226	< 0.01	39	570	< 2	< 2	9	30	0.40	< 10	< 10	132	< 10	82
N112896	205	226	0.01	15	1490	16	< 2	3	53	0.15	< 10	< 10	150	< 10	690
N112897	205	226	0.01	18	730	< 2	< 2	5	12	0.70	< 10	< 10	246	< 10	126
N112898	205	226	0.01	16	710	2	< 2	8	14	0.54	< 10	< 10	263	< 10	108
N112899	205	226	< 0.01	15	730	< 2	< 2	8	13	0.60	< 10	< 10	235	< 10	98
N112900	205	226	0.01	21	740	4	< 2	8	17	0.50	< 10	< 10	244	< 10	110
N112901	205	226	0.02	18	740	2	< 2	8	18	0.62	< 10	< 10	226	< 10	156
N112902	205	226	0.04	70	720	16	< 2	8	41	0.24	< 10	< 10	121	< 10	294
N112903	205	226	0.04	62	220	2	< 2	5	19	0.22	< 10	< 10	76	< 10	56
N112904	205	226	0.05	76	190	2	< 2	6	17	0.23	< 10	< 10	95	< 10	62

CERTIFICATION: Ian Bichler

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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-ID97-08
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Invoice No. : 19729925
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9729925

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N112888	208	294	300	2.88	14	0.69	30	160	< 5	60	1.26	15	710	70	29100	>30.0	< 10	< 0.01	0.43	270	35

CERTIFICATION: Ian Bradley

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

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

Project : ICE-ID97-08
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CERTIFICATE OF ANALYSIS A9729925

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
N112888	208	294	0.04	30	500	80	< 10	< 5	15	0.03	< 20	< 20	20	< 20	3410

CERTIFICATION: Ian Bradley

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

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Project : ICE-ID97-O8
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Invoice No. : I9729924
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9729924

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
N112885	205	294	0.2	2.63	12	80	< 0.5	6	2.00	< 0.5	25	16	62	6.57	10	< 1	0.10	< 10	1.39	915	< 1
N112886	205	294	< 0.2	2.73	< 2	50	< 0.5	< 2	1.89	< 0.5	27	15	74	6.76	10	< 1	0.04	< 10	1.66	1000	< 1
N112887	205	294	< 0.2	2.79	< 2	80	< 0.5	< 2	2.60	< 0.5	28	14	64	6.79	10	< 1	0.05	< 10	1.86	985	< 1
N112889	205	294	< 0.2	3.46	< 2	360	< 0.5	< 2	2.85	< 0.5	26	111	1235	8.97	10	< 1	0.05	< 10	2.34	880	< 1
N112890	205	294	< 0.2	4.37	< 2	130	< 0.5	< 2	4.08	< 0.5	26	125	100	4.67	10	< 1	0.03	< 10	2.44	940	< 1
N112891	205	294	< 0.2	3.98	< 2	40	< 0.5	< 2	3.87	< 0.5	22	101	84	4.10	10	< 1	0.03	< 10	2.03	890	< 1
N112892	205	294	1.6	2.60	2	20	< 0.5	< 2	1.46	0.5	118	74	4770	12.55	10	< 1	0.01	< 10	1.96	1125	3

CERTIFICATION: Stan Bichler

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Project : ICE-ID97-O8
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CERTIFICATE OF ANALYSIS A9729924

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	Spec Gr S.G.
N112885	205	294	< 0.01	16	750	2	< 2	4	17	0.63	< 10	< 10	205	< 10	92	-----
N112886	205	294	< 0.01	17	760	< 2	< 2	5	19	0.71	< 10	< 10	235	< 10	102	-----
N112887	205	294	< 0.01	17	690	< 2	< 2	6	27	0.72	< 10	< 10	209	< 10	106	2.93
N112889	205	294	0.02	63	1600	4	< 2	6	48	0.19	< 10	< 10	166	< 10	202	2.94
N112890	205	294	0.03	64	240	< 2	< 2	7	18	0.27	< 10	< 10	119	< 10	62	-----
N112891	205	294	0.03	61	290	2	< 2	6	15	0.24	< 10	< 10	99	< 10	52	-----
N112892	205	294	< 0.01	28	2140	22	< 2	9	27	0.35	< 10	< 10	179	< 10	378	-----

CERTIFICATION: Ian Bichler

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

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Project : ICE-1D97-06
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CERTIFICATE OF ANALYSIS A9729812

SAMPLE	PREP CODE	Cu %
N112802	244 --	1.08
N112807	244 --	1.53

CERTIFICATION: David Chang

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

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Project : ICE-ID97-07
Comments:

Certificate Date: 01-JUL-97
Invoice No. : I9729811
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9729811

SAMPLE	PREP CODE	Cu %
N112819	244 --	6.80
N112830	244 --	1.64

CERTIFICATION: Said Leina

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

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Y1A 3S9

Project : ICE-ID-97-11
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Invoice No. : I9729508
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9729508

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	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 %
N112905	205	294	-----	-----	< 0.2	2.78	< 2	100	< 0.5	< 2	2.12	< 0.5	23	27	64	5.43	10	< 1	< 0.01	< 10	1.77
N112906	205	294	-----	-----	< 0.2	3.04	< 2	140	< 0.5	< 2	2.42	< 0.5	24	33	53	5.90	10	1	< 0.01	< 10	1.95
N112907	205	294	-----	-----	< 0.2	3.84	2	80	< 0.5	< 2	3.40	< 0.5	30	46	91	7.17	10	< 1	< 0.01	< 10	2.70
N112908	208	294	320	5.20	8.2	0.68	6	10	< 0.5	Intf*	3.85	1.5	1510	38	>10000	>15.00	< 10	< 1	< 0.01	< 10	0.73
N112909	208	294	485	9.09	24.6	0.14	6	< 10	< 0.5	Intf*	0.94	3.5	1315	16	>10000	>15.00	< 10	3	< 0.01	< 10	0.12
N112910	208	294	340	10.80	16.2	0.39	< 2	< 10	< 0.5	Intf*	2.37	3.0	778	46	>10000	>15.00	< 10	< 1	0.01	< 10	0.25
N112911	208	294	350	12.50	3.6	0.13	< 2	< 10	< 0.5	Intf*	0.66	10.5	1820	31	>10000	>15.00	< 10	< 1	< 0.01	< 10	0.06
N112912	205	294	-----	-----	1.0	3.02	< 2	30	< 0.5	Intf*	1.66	0.5	412	125	>10000	10.30	< 10	< 1	0.22	< 10	1.84
N112913	205	294	-----	-----	< 0.2	3.22	< 2	90	< 0.5	< 2	2.80	< 0.5	35	196	851	5.99	< 10	< 1	0.21	< 10	2.18
N112914	205	294	-----	-----	< 0.2	3.82	< 2	80	< 0.5	< 2	2.02	< 0.5	36	216	810	6.82	10	< 1	0.14	< 10	2.79

CERTIFICATION: Stuart Bichler

*INTERFERENCE: HIGH Cu on Bi and P

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

To: EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Project : ICE-ID-97-11
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Invoice No. : I9729508
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Account : MPO

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CERTIFICATE OF ANALYSIS A9729508

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Spec Gr S.G.
N112905	205	294	685	< 1	< 0.01	27	460	8	< 2	8	20	0.40	< 10	< 10	162	< 10	82	-----
N112906	205	294	845	2	0.01	27	460	< 2	< 2	10	24	0.50	< 10	< 10	202	< 10	70	2.89
N112907	205	294	1320	< 1	< 0.01	33	450	< 2	< 2	17	37	0.54	< 10	< 10	213	< 10	96	2.82
N112908	208	294	705	84	< 0.01	16	Intf*	12	< 2	4	26	0.01	< 10	10	51	< 10	86	3.40
N112909	208	294	175	66	< 0.01	14	Intf*	30	< 2	< 1	8	< 0.01	< 10	10	18	< 10	390	4.06
N112910	208	294	470	37	< 0.01	13	Intf*	30	< 2	3	20	< 0.01	< 10	10	35	< 10	348	3.70
N112911	208	294	125	87	< 0.01	12	Intf*	30	< 2	< 1	6	< 0.01	10	10	9	< 10	510	3.90
N112912	205	294	545	23	0.02	37	Intf*	6	< 2	15	78	< 0.01	< 10	< 10	109	< 10	142	2.78
N112913	205	294	840	4	0.03	60	290	< 2	< 2	23	33	< 0.01	< 10	< 10	144	< 10	108	2.64
N112914	205	294	925	3	0.04	71	350	< 2	< 2	22	29	< 0.01	< 10	< 10	145	< 10	148	-----

CERTIFICATION: Stewart Bachlet

* INTERFERENCE: HIGH Cu on Bi and P

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

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Project : ICE-1D97-06
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Invoice No. :I9728902
P.O. Number :
Account :MPO

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CERTIFICATE OF ANALYSIS A9728902

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
N112802	205	226	1.8	1.93	< 2	10	< 0.5	Intf*	2.93	< 0.5	110	79	>10000	>15.00	10	< 1	0.23	< 10	1.29	1065	5
N112803	205	226	0.6	1.75	< 2	100	< 0.5	< 2	2.85	< 0.5	36	84	4550	9.46	< 10	< 1	0.03	< 10	0.94	655	1
N112804	205	226	< 0.2	2.52	< 2	100	< 0.5	< 2	1.47	< 0.5	30	13	118	6.80	< 10	< 1	0.17	< 10	1.55	875	< 1
N112805	205	226	< 0.2	2.20	< 2	70	< 0.5	< 2	1.67	< 0.5	29	12	72	7.10	< 10	< 1	0.27	< 10	1.40	845	< 1
N112806	205	226	5.0	0.73	6	< 10	< 0.5	4	0.38	< 0.5	315	48	9410	>15.00	< 10	1	0.04	< 10	0.59	300	11
N112807	205	226	7.0	1.00	4	< 10	< 0.5	Intf*	0.50	4.5	374	76	>10000	>15.00	< 10	3	0.05	< 10	0.80	405	12
N112808	205	226	0.4	3.60	< 2	190	< 0.5	< 2	2.33	< 0.5	48	164	1730	7.04	10	< 1	0.01	< 10	3.35	1015	< 1
N112809	205	226	< 0.2	4.75	< 2	90	< 0.5	< 2	3.56	< 0.5	37	163	194	6.26	10	< 1	0.10	< 10	3.86	1320	< 1
N112810	205	226	< 0.2	3.60	< 2	350	< 0.5	< 2	4.41	< 0.5	29	116	106	4.77	< 10	< 1	0.12	< 10	2.83	1285	< 1

CERTIFICATION: Stewart Bichler

*INTERFERENCE: Cu ON Bi AND P.

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

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WHITEHORSE, YT
Y1A 3S9

Project : ICE-1D97-06
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Invoice No. : 19728902
P.O. Number :
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CERTIFICATE OF ANALYSIS A9728902

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
N112802	205	226	0.06	32	Intf*	10	< 2	3	101	0.06	< 10	< 10	298	< 10	104
N112803	205	226	0.01	33	880	10	2	5	35	0.12	< 10	< 10	209	< 10	84
N112804	205	226	< 0.01	19	790	< 2	< 2	6	39	0.61	< 10	< 10	190	< 10	102
N112805	205	226	< 0.01	18	760	< 2	< 2	8	26	0.62	< 10	< 10	178	< 10	96
N112806	205	226	< 0.01	16	250	24	2	5	11	0.20	< 10	< 10	121	< 10	386
N112807	205	226	< 0.01	17	Intf*	34	4	3	18	0.13	< 10	< 10	104	< 10	2570
N112808	205	226	< 0.01	55	480	< 2	8	14	143	0.42	< 10	< 10	136	< 10	308
N112809	205	226	< 0.01	63	280	< 2	2	13	21	0.44	< 10	< 10	155	< 10	90
N112810	205	226	0.03	49	220	< 2	< 2	13	32	0.35	< 10	< 10	129	< 10	60

CERTIFICATION: David Bickle

*INTERFERENCE: Cu ON Bi AND P.

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

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Y1A 3S9

Project : ICE-ID97-07
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Certificate Date: 28-JUN-97
Invoice No. :19728900
P.O. Number :
Account :MPO

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CERTIFICATE OF ANALYSIS A9728900

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
N112811	205	226	0.4	3.86	< 2	700	< 0.5	< 2	5.44	< 0.5	32	99	70	6.85	10	< 1	0.04	< 10	2.56	1415	< 1
N112812	205	226	< 0.2	3.74	< 2	340	< 0.5	< 2	3.82	< 0.5	35	101	77	6.40	10	< 1	0.05	< 10	2.38	1325	< 1
N112813	205	226	0.2	4.27	8	100	< 0.5	< 2	2.79	< 0.5	42	27	69	8.69	10	1	0.03	< 10	2.80	1185	< 1
N112814	205	226	< 0.2	1.33	214	60	< 0.5	< 2	11.20	< 0.5	25	18	25	6.41	< 10	1	0.03	< 10	3.76	1520	2
N112815	205	226	< 0.2	2.99	36	150	< 0.5	< 2	6.28	< 0.5	44	13	54	6.49	10	< 1	0.05	< 10	1.99	1565	< 1
N112816	205	226	0.2	4.76	8	70	< 0.5	< 2	0.89	< 0.5	51	21	69	9.29	10	< 1	0.04	< 10	2.84	1425	< 1
N112817	205	226	< 0.2	1.44	< 2	380	< 0.5	< 2	2.16	< 0.5	13	121	58	4.32	< 10	< 1	0.02	< 10	0.86	645	< 1
N112818	205	226	0.2	3.30	< 2	160	< 0.5	< 2	2.34	< 0.5	32	68	119	8.30	10	< 1	0.01	< 10	2.55	1405	< 1
N112819	205	226	15.8	0.22	6	< 10	< 0.5	Intf*	0.15	8.0	508	12	>10000	>15.00	10	5	< 0.01	< 10	0.08	65	24
N112820	205	226	0.8	3.25	< 2	190	< 0.5	< 2	2.26	< 0.5	33	158	296	5.82	< 10	< 1	0.07	< 10	3.12	1070	< 1
N112821	205	226	< 0.2	3.53	< 2	40	< 0.5	< 2	3.14	< 0.5	28	108	612	4.03	< 10	< 1	0.10	< 10	2.33	805	< 1
N112822	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N112823	205	226	0.6	3.98	< 2	40	< 0.5	< 2	1.28	< 0.5	33	163	1105	9.72	10	< 1	0.01	< 10	3.90	1130	1
N112824	205	226	0.2	3.04	< 2	60	< 0.5	< 2	1.41	< 0.5	31	60	145	5.72	< 10	< 1	0.27	< 10	3.01	725	< 1
N112825	205	226	< 0.2	3.92	8	100	< 0.5	< 2	1.60	< 0.5	37	118	367	9.12	10	< 1	0.10	< 10	3.82	880	< 1
N112826	205	226	0.2	7.02	8	30	< 0.5	< 2	1.49	< 0.5	66	129	888	10.40	10	< 1	0.02	< 10	7.37	1180	2
N112827	205	226	0.4	5.56	6	< 10	< 0.5	< 2	0.30	< 0.5	86	125	634	11.60	10	< 1	< 0.01	< 10	4.51	650	4
N112828	205	226	1.6	4.48	2	< 10	< 0.5	< 2	0.29	3.5	106	108	8800	13.15	10	1	< 0.01	< 10	3.19	345	8
N112829	205	226	1.0	5.01	2	< 10	< 0.5	< 2	0.28	< 0.5	110	120	2950	12.55	10	< 1	< 0.01	< 10	3.81	340	11
N112830	205	226	3.2	4.22	< 2	< 10	< 0.5	Intf*	0.31	< 0.5	104	106	>10000	12.55	10	1	< 0.01	< 10	3.24	290	6
N112831	205	226	1.0	5.73	2	< 10	< 0.5	< 2	0.31	< 0.5	86	132	889	12.20	10	< 1	< 0.01	< 10	4.78	420	5
N112832	205	226	0.8	4.69	< 2	< 10	< 0.5	< 2	0.61	< 0.5	92	113	1550	11.40	10	< 1	< 0.01	< 10	4.14	370	3
N112833	205	226	3.8	2.85	8	< 10	< 0.5	< 2	0.51	1.0	102	100	8780	11.05	< 10	< 1	< 0.01	< 10	2.59	225	10
N112834	205	226	0.6	2.88	6	< 10	< 0.5	< 2	0.16	0.5	86	68	1860	14.60	10	1	< 0.01	< 10	2.43	215	5
N112835	205	226	0.4	4.30	< 2	< 10	< 0.5	< 2	0.16	< 0.5	89	94	1135	14.20	10	< 1	< 0.01	< 10	3.63	325	2
N112836	205	226	0.8	3.06	10	10	< 0.5	< 2	0.19	< 0.5	79	92	2820	12.55	10	1	< 0.01	< 10	2.86	240	6
N112837	205	226	1.8	2.42	2	20	< 0.5	< 2	0.22	2.0	98	100	9330	11.60	< 10	< 1	< 0.01	< 10	2.20	175	8
N112838	205	226	0.6	2.88	< 2	10	< 0.5	< 2	0.20	3.0	77	81	3600	11.40	< 10	1	< 0.01	< 10	2.75	175	9
N112839	205	226	1.6	3.68	< 2	< 10	< 0.5	< 2	0.19	0.5	128	92	6660	13.75	10	1	< 0.01	< 10	2.96	235	3
N112840	205	226	1.0	2.71	< 2	10	< 0.5	< 2	0.26	13.0	108	98	2870	11.10	< 10	< 1	< 0.01	< 10	2.25	185	13
N112841	205	226	0.6	4.22	10	< 10	< 0.5	< 2	0.28	1.5	97	105	1520	12.45	10	1	< 0.01	< 10	3.33	275	3
N112842	205	226	0.6	4.42	2	40	< 0.5	< 2	0.83	1.0	117	87	2550	12.50	10	< 1	< 0.01	< 10	3.73	330	7
N112843	205	226	1.2	3.45	8	< 10	< 0.5	< 2	0.22	< 0.5	83	68	8650	12.65	10	< 1	< 0.01	< 10	2.85	220	2
N112844	205	226	0.6	3.94	< 2	30	< 0.5	< 2	0.17	< 0.5	89	95	537	13.00	10	1	< 0.01	< 10	3.24	250	2
N112845	205	226	0.4	4.32	< 2	< 10	< 0.5	< 2	0.23	1.5	109	127	947	12.40	10	< 1	< 0.01	< 10	3.74	360	3
N112846	205	226	0.8	5.30	< 2	40	< 0.5	< 2	0.86	< 0.5	119	107	3540	11.80	10	< 1	< 0.01	< 10	4.37	870	3
N112847	205	226	0.2	3.48	< 2	40	< 0.5	< 2	2.19	< 0.5	46	25	242	7.73	10	< 1	0.03	< 10	3.01	1290	< 1
N112848	205	226	0.2	3.61	< 2	50	< 0.5	< 2	2.23	< 0.5	37	111	232	6.55	10	< 1	< 0.01	< 10	3.30	930	< 1
N112849	205	226	< 0.2	2.51	< 2	40	< 0.5	< 2	1.64	< 0.5	33	26	93	5.73	< 10	< 1	0.05	< 10	2.10	785	< 1
N112850	205	226	< 0.2	2.77	< 2	30	< 0.5	< 2	1.82	< 0.5	31	30	97	5.42	< 10	< 1	0.06	< 10	2.16	775	< 1

CERTIFICATION: Ian Buchler

*INTERFERENCE: Cu ON Bi AND P.

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 : ICE-ID97-07
Comments:

Pa[illegible]ber :1-B
Tota[illegible]ges :1
Certificate Date: 28-JUN-97
Invoice No. :19728900
P.O. Number :
Account :MPO

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9728900

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
N112811	205	226	0.01	35	450	< 2	2	23	42	0.07	< 10	< 10	166	< 10	82
N112812	205	226	0.01	37	510	< 2	2	24	40	0.07	< 10	< 10	182	< 10	88
N112813	205	226	0.01	29	720	< 2	4	29	20	< 0.01	< 10	< 10	266	< 10	118
N112814	205	226	< 0.01	23	260	8	4	14	99	< 0.01	< 10	< 10	112	< 10	88
N112815	205	226	0.01	40	630	2	2	28	41	< 0.01	< 10	< 10	201	< 10	110
N112816	205	226	0.02	27	830	< 2	2	27	11	< 0.01	< 10	< 10	284	< 10	134
N112817	205	226	0.01	16	230	< 2	2	7	26	0.06	< 10	< 10	112	< 10	50
N112818	205	226	0.01	29	690	< 2	6	16	33	0.49	< 10	< 10	199	< 10	138
N112819	205	226	< 0.01	2	Intf*	72	4	< 1	9	0.01	< 10	< 10	1	< 10	2200
N112820	205	226	0.03	56	260	< 2	4	14	21	0.24	< 10	< 10	119	< 10	140
N112821	205	226	0.04	48	180	< 2	2	5	27	0.22	< 10	< 10	90	< 10	70
N112822	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N112823	205	226	< 0.01	38	310	< 2	6	17	16	0.41	< 10	< 10	202	< 10	676
N112824	205	226	0.01	28	330	< 2	4	10	15	0.44	< 10	< 10	138	< 10	268
N112825	205	226	0.01	33	330	< 2	6	16	14	0.39	< 10	< 10	206	< 10	188
N112826	205	226	< 0.01	34	390	< 2	6	25	11	0.26	< 10	< 10	278	< 10	378
N112827	205	226	< 0.01	33	240	< 2	4	19	4	0.05	< 10	< 10	186	< 10	166
N112828	205	226	< 0.01	25	40	10	4	16	5	0.01	< 10	< 10	124	< 10	954
N112829	205	226	< 0.01	29	140	4	6	18	3	0.01	< 10	< 10	142	< 10	132
N112830	205	226	< 0.01	22	Intf*	14	4	16	2	0.02	< 10	< 10	115	< 10	196
N112831	205	226	< 0.01	33	220	2	4	21	3	0.04	< 10	< 10	169	< 10	336
N112832	205	226	< 0.01	25	150	< 2	4	18	3	0.05	< 10	< 10	141	< 10	100
N112833	205	226	< 0.01	15	< 10	16	4	12	3	0.04	< 10	< 10	88	< 10	656
N112834	205	226	< 0.01	11	60	14	6	11	1	0.05	< 10	< 10	90	< 10	398
N112835	205	226	< 0.01	18	110	< 2	4	15	1	0.07	< 10	< 10	105	< 10	152
N112836	205	226	< 0.01	14	80	8	6	12	1	0.06	< 10	< 10	87	< 10	370
N112837	205	226	< 0.01	11	< 10	8	4	10	2	0.04	< 10	< 10	66	< 10	754
N112838	205	226	< 0.01	13	40	2	2	12	1	0.09	< 10	< 10	85	< 10	1010
N112839	205	226	< 0.01	15	10	2	2	15	1	0.05	< 10	< 10	102	< 10	608
N112840	205	226	< 0.01	12	50	6	2	11	2	0.04	< 10	< 10	81	< 10	3400
N112841	205	226	< 0.01	20	150	2	6	18	2	0.13	< 10	< 10	127	< 10	576
N112842	205	226	< 0.01	18	130	< 2	4	18	4	0.10	< 10	< 10	124	< 10	492
N112843	205	226	< 0.01	14	< 10	8	2	14	1	0.07	< 10	< 10	108	< 10	230
N112844	205	226	< 0.01	20	110	< 2	6	14	1	0.05	< 10	< 10	106	< 10	162
N112845	205	226	< 0.01	26	100	< 2	6	15	2	0.09	< 10	< 10	111	< 10	484
N112846	205	226	< 0.01	24	180	< 2	6	21	6	0.25	< 10	< 10	168	< 10	420
N112847	205	226	< 0.01	20	730	< 2	4	17	26	0.77	< 10	< 10	210	< 10	288
N112848	205	226	< 0.01	35	310	< 2	4	15	18	0.36	< 10	< 10	161	< 10	236
N112849	205	226	0.01	22	510	< 2	6	6	20	0.50	< 10	< 10	134	< 10	90
N112850	205	226	0.01	25	430	< 2	2	6	20	0.45	< 10	< 10	128	< 10	84

CERTIFICATION: Ian Bichler

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

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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 : ICE-ID97-05
Comments:

Page Number :1
Total Pages :1
Certificate Date: 23-JUN-97
Invoice No. : I9728691
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9728691

SAMPLE	PREP CODE		Cu %									
N112666	244	--	1.32									

CERTIFICATION: Barb Leingo

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

Project : ICE-ID97-05
Comments:

Certificate Date: 22-JUN-97
Invoice No. :I9727874
P.O. Number :
Account :MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9727874

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
N112659	205	226	< 0.2	4.28	< 2	40	< 0.5	< 2	3.67	< 0.5	27	126	163	4.54	< 10	< 1	0.05	< 10	2.65	870	< 1
N112660	205	226	< 0.2	3.83	< 2	40	< 0.5	< 2	3.25	< 0.5	31	176	169	4.25	< 10	< 1	0.04	< 10	2.79	890	< 1
N112661	205	226	< 0.2	3.50	< 2	70	< 0.5	< 2	3.61	< 0.5	29	153	161	4.72	< 10	< 1	0.07	< 10	2.24	900	< 1
N112662	205	226	3.4	3.76	< 2	20	< 0.5	< 2	0.84	12.0	201	95	5620	13.85	10	< 1	< 0.01	< 10	3.31	660	8
N112663	205	226	4.8	3.40	2	10	< 0.5	2	0.35	6.0	174	119	6970	>15.00	10	< 1	< 0.01	< 10	2.81	335	12
N112664	205	226	2.2	4.02	2	30	< 0.5	2	0.28	6.5	120	135	3510	12.65	10	< 1	< 0.01	< 10	3.47	290	6
N112665	205	226	2.6	2.95	14	< 10	< 0.5	4	0.31	6.5	149	106	5280	13.60	10	< 1	< 0.01	< 10	2.36	220	17
N112666	205	226	3.0	3.61	2	< 10	< 0.5	Intf*	0.27	5.0	216	118	>10000	>15.00	10	< 1	0.01	< 10	2.57	330	21
N112667	205	226	7.0	2.55	14	< 10	< 0.5	2	0.18	14.5	160	85	2160	>15.00	10	< 1	0.03	< 10	1.76	325	19
N112668	205	226	0.8	3.70	< 2	190	< 0.5	< 2	0.87	2.5	37	120	877	7.13	10	< 1	0.01	< 10	3.70	575	< 1
N112669	205	226	1.0	4.08	< 2	10	< 0.5	< 2	1.02	8.0	37	125	1020	8.58	10	< 1	0.02	< 10	3.90	595	< 1
N112670	205	226	0.2	4.89	< 2	50	< 0.5	< 2	2.67	2.0	61	112	334	10.50	10	< 1	< 0.01	< 10	4.61	365	< 1
N112671	205	226	0.6	4.00	< 2	< 10	< 0.5	6	2.89	< 0.5	60	89	213	12.10	10	< 1	< 0.01	< 10	3.67	230	< 1
N112672	205	226	< 0.2	4.32	< 2	10	< 0.5	4	0.58	1.0	71	93	73	14.45	10	< 1	< 0.01	< 10	3.75	230	< 1
N112673	205	226	0.8	4.32	< 2	< 10	< 0.5	< 2	0.33	1.0	138	89	341	14.70	10	< 1	< 0.01	< 10	3.49	195	5
N112674	205	226	< 0.2	3.19	< 2	< 10	< 0.5	< 2	0.45	< 0.5	68	64	19	>15.00	10	< 1	< 0.01	< 10	2.65	135	2
N112675	205	226	< 0.2	3.96	< 2	< 10	< 0.5	< 2	0.36	< 0.5	70	78	5	13.55	10	< 1	< 0.01	< 10	3.77	150	< 1
N112676	205	226	< 0.2	4.20	< 2	10	< 0.5	< 2	0.72	< 0.5	84	81	11	>15.00	10	< 1	< 0.01	< 10	3.72	195	< 1
N112677	205	226	0.6	1.50	2	10	< 0.5	2	0.46	< 0.5	58	43	62	>15.00	10	< 1	< 0.01	< 10	1.59	170	4
N112678	205	226	0.6	2.96	< 2	10	< 0.5	< 2	0.15	0.5	62	59	24	>15.00	10	< 1	< 0.01	< 10	2.70	160	1
N112679	205	226	< 0.2	2.03	< 2	< 10	< 0.5	2	0.12	0.5	51	51	36	>15.00	10	< 1	< 0.01	< 10	1.82	105	4
N112680	205	226	0.8	1.64	8	< 10	< 0.5	2	0.05	< 0.5	133	42	103	>15.00	10	< 1	< 0.01	< 10	1.33	85	4
N112681	205	226	1.2	1.92	2	< 10	< 0.5	< 2	0.04	3.5	84	43	96	>15.00	10	< 1	< 0.01	< 10	1.54	105	5
N112682	205	226	0.6	2.40	< 2	< 10	< 0.5	< 2	0.10	< 0.5	86	56	28	>15.00	10	< 1	< 0.01	< 10	2.05	105	3
N112683	205	226	0.2	1.18	6	< 10	< 0.5	2	0.49	< 0.5	368	33	168	>15.00	10	< 1	< 0.01	< 10	1.20	120	1
N112684	205	226	0.2	1.35	< 2	< 10	< 0.5	4	0.87	< 0.5	307	39	113	>15.00	10	< 1	< 0.01	< 10	1.58	135	1
N112685	205	226	1.0	2.55	< 2	< 10	< 0.5	2	0.41	0.5	154	78	76	14.55	10	< 1	< 0.01	< 10	2.29	160	1
N112686	205	226	1.4	2.33	< 2	< 10	< 0.5	< 2	0.51	0.5	192	70	204	>15.00	10	< 1	< 0.01	< 10	2.11	150	1
N112687	205	226	1.4	2.81	< 2	< 10	< 0.5	< 2	0.72	< 0.5	204	75	118	14.30	10	< 1	< 0.01	< 10	2.44	270	< 1
N112688	205	226	0.6	3.75	< 2	< 10	< 0.5	< 2	0.40	1.5	59	90	176	10.45	10	< 1	< 0.01	< 10	3.54	405	1
N112689	205	226	3.2	5.83	< 2	70	< 0.5	2	0.64	0.5	56	103	546	10.05	10	< 1	< 0.01	< 10	5.50	910	< 1
N112690	205	226	0.6	4.90	< 2	130	< 0.5	< 2	0.95	< 0.5	33	107	461	7.96	< 10	< 1	< 0.01	< 10	5.27	1135	< 1
N112691	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N112692	205	226	< 0.2	4.80	< 2	230	< 0.5	< 2	4.45	< 0.5	34	87	248	8.04	10	< 1	0.05	< 10	4.01	1725	< 1
N112693	205	226	< 0.2	5.19	< 2	110	< 0.5	2	1.86	< 0.5	45	97	515	9.87	< 10	< 1	0.06	< 10	4.11	1460	< 1
N112694	205	226	< 0.2	2.13	10	340	< 0.5	< 2	4.31	< 0.5	15	32	84	3.48	< 10	< 1	0.20	< 10	1.22	1500	3
N112695	205	226	< 0.2	2.28	8	430	< 0.5	< 2	3.57	< 0.5	11	34	63	3.68	< 10	< 1	0.24	< 10	1.30	1785	1
N112696	205	226	< 0.2	1.28	8	410	< 0.5	< 2	1.12	< 0.5	14	30	65	3.87	< 10	< 1	0.24	< 10	0.72	1975	1
N112697	205	226	< 0.2	0.82	12	310	< 0.5	< 2	1.26	< 0.5	8	48	66	3.04	< 10	< 1	0.19	< 10	0.65	2070	2
N112698	205	226	< 0.2	0.65	< 2	380	< 0.5	< 2	2.73	< 0.5	6	27	50	2.47	< 10	< 1	0.17	< 10	0.98	>10000	1

CERTIFICATION: Stuart Bichler

* INTERFERENCES: Cu on Bi and P

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Page Number :1-B
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CERTIFICATE OF ANALYSIS A9727874

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
N112659	205	226	0.03	57	240	< 2	2	11	18	0.24	< 10	< 10	125	< 10	72
N112660	205	226	0.04	76	210	< 2	< 2	14	17	0.26	< 10	< 10	133	< 10	70
N112661	205	226	0.02	66	230	< 2	< 2	15	17	0.27	< 10	< 10	127	< 10	96
N112662	205	226	< 0.01	28	200	22	< 2	17	7	0.18	< 10	< 10	120	< 10	4240
N112663	205	226	< 0.01	30	100	28	< 2	14	4	0.03	< 10	< 10	98	< 10	2960
N112664	205	226	< 0.01	33	170	12	< 2	16	3	0.03	< 10	< 10	108	< 10	2500
N112665	205	226	< 0.01	26	130	34	< 2	11	3	< 0.01	< 10	< 10	86	< 10	2610
N112666	205	226	< 0.01	34	Intf*	22	< 2	14	3	< 0.01	< 10	< 10	107	< 10	1950
N112667	205	226	< 0.01	22	80	42	< 2	9	2	0.01	< 10	< 10	84	< 10	5060
N112668	205	226	0.01	36	240	< 2	< 2	15	8	0.07	< 10	< 10	140	< 10	1020
N112669	205	226	< 0.01	34	250	< 2	< 2	15	11	< 0.01	< 10	< 10	149	< 10	2820
N112670	205	226	< 0.01	34	220	< 2	< 2	18	16	0.07	< 10	< 10	144	< 10	1000
N112671	205	226	< 0.01	28	150	< 2	< 2	15	12	0.03	< 10	< 10	126	< 10	728
N112672	205	226	< 0.01	31	90	< 2	< 2	17	5	0.05	< 10	< 10	130	< 10	968
N112673	205	226	< 0.01	30	150	< 2	2	17	3	0.05	< 10	< 10	108	< 10	614
N112674	205	226	< 0.01	22	60	< 2	< 2	12	3	0.06	< 10	< 10	85	< 10	288
N112675	205	226	< 0.01	28	90	< 2	< 2	14	3	0.06	< 10	< 10	102	< 10	272
N112676	205	226	< 0.01	31	80	< 2	< 2	16	6	0.07	< 10	< 10	108	< 10	226
N112677	205	226	< 0.01	12	30	< 2	< 2	6	5	0.04	< 10	< 10	52	< 10	390
N112678	205	226	< 0.01	20	20	2	< 2	12	3	0.06	< 10	< 10	77	< 10	494
N112679	205	226	< 0.01	14	< 10	< 2	< 2	8	2	0.04	< 10	< 10	61	< 10	474
N112680	205	226	< 0.01	12	< 10	< 2	< 2	7	1	0.03	< 10	< 10	47	< 10	184
N112681	205	226	< 0.01	12	10	6	< 2	7	1	0.02	< 10	< 10	52	< 10	1510
N112682	205	226	< 0.01	13	10	< 2	< 2	9	1	0.05	< 10	< 10	57	< 10	308
N112683	205	226	< 0.01	8	50	2	< 2	4	6	0.02	< 10	< 10	26	< 10	290
N112684	205	226	< 0.01	10	40	< 2	< 2	5	8	0.01	< 10	< 10	33	< 10	220
N112685	205	226	< 0.01	20	30	2	< 2	10	4	0.01	< 10	< 10	68	< 10	1425
N112686	205	226	< 0.01	17	10	4	< 2	10	5	0.01	< 10	< 10	63	< 10	570
N112687	205	226	< 0.01	19	20	12	< 2	11	8	0.01	< 10	< 10	80	< 10	480
N112688	205	226	< 0.01	25	210	8	< 2	13	7	0.01	< 10	< 10	180	< 10	660
N112689	205	226	< 0.01	34	270	22	< 2	22	10	< 0.01	< 10	< 10	208	< 10	628
N112690	205	226	< 0.01	33	320	2	< 2	22	14	0.13	< 10	< 10	215	< 10	322
N112691	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N112692	205	226	< 0.01	36	340	< 2	< 2	21	92	0.05	< 10	< 10	194	< 10	264
N112693	205	226	< 0.01	35	440	< 2	< 2	19	34	0.01	< 10	< 10	166	< 10	192
N112694	205	226	< 0.01	37	570	10	< 2	5	79	< 0.01	< 10	< 10	48	< 10	170
N112695	205	226	< 0.01	33	640	10	< 2	5	105	< 0.01	< 10	< 10	51	< 10	124
N112696	205	226	< 0.01	42	810	14	< 2	3	19	< 0.01	< 10	< 10	32	< 10	122
N112697	205	226	< 0.01	37	220	10	< 2	4	13	< 0.01	< 10	< 10	32	< 10	106
N112698	205	226	0.01	21	150	4	< 2	5	36	< 0.01	< 10	< 10	41	< 10	90

CERTIFICATION:

*INTERFERENCES: Cu on Bi and P

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 : ICE-ID97-05
Comments:

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9727874

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
N112699	205	226	0.2	0.43	< 2	540	< 0.5	20	4.77	< 0.5	4	52	50	3.76	< 10	< 1	0.16	< 10	1.43	>10000	< 1
N112700	205	226	< 0.2	0.56	< 2	530	< 0.5	< 2	2.51	< 0.5	5	78	54	2.09	< 10	< 1	0.17	< 10	0.68	>10000	3
N112751	205	226	0.2	0.68	< 2	370	< 0.5	< 2	0.95	< 0.5	5	52	73	1.71	< 10	< 1	0.14	< 10	0.37	3580	2
N112752	205	226	< 0.2	0.65	< 2	510	< 0.5	< 2	0.94	< 0.5	5	57	55	1.48	< 10	< 1	0.17	< 10	0.35	>10000	1
N112753	205	226	< 0.2	0.67	< 2	630	< 0.5	14	3.70	< 0.5	15	29	44	2.99	< 10	< 1	0.18	< 10	1.08	>10000	2
N112754	205	226	< 0.2	0.54	< 2	570	< 0.5	< 2	0.57	< 0.5	3	88	53	1.26	< 10	< 1	0.16	< 10	0.20	4030	< 1
N112755	205	226	< 0.2	0.47	< 2	510	< 0.5	< 2	0.86	< 0.5	4	71	63	1.56	< 10	< 1	0.13	< 10	0.26	5750	< 1
N112756	205	226	< 0.2	0.77	< 2	580	< 0.5	< 2	0.97	< 0.5	5	44	65	1.74	< 10	< 1	0.17	< 10	0.42	3220	1
N112757	205	226	< 0.2	0.56	< 2	550	< 0.5	< 2	3.31	< 0.5	4	42	55	1.70	< 10	< 1	0.17	< 10	1.27	9630	1
N112758	205	226	< 0.2	0.73	2	580	< 0.5	< 2	1.80	< 0.5	7	46	73	1.95	< 10	< 1	0.18	< 10	0.58	3330	1
N112759	205	226	< 0.2	0.67	4	580	< 0.5	< 2	0.40	< 0.5	7	68	66	1.39	< 10	< 1	0.18	< 10	0.26	860	1
N112760	205	226	< 0.2	0.72	< 2	870	< 0.5	< 2	0.50	< 0.5	7	69	137	1.56	< 10	< 1	0.18	< 10	0.37	805	1
N112761	205	226	< 0.2	0.72	< 2	520	< 0.5	< 2	0.23	< 0.5	11	75	79	1.91	< 10	< 1	0.22	10	0.35	960	3
N112762	205	226	< 0.2	1.49	< 2	610	< 0.5	< 2	0.31	< 0.5	12	53	41	2.13	< 10	< 1	0.27	10	0.77	835	1
N112763	205	226	< 0.2	1.63	< 2	640	< 0.5	< 2	0.53	< 0.5	13	42	50	2.26	< 10	< 1	0.26	10	0.95	1930	2
N112764	205	226	< 0.2	1.89	< 2	790	< 0.5	< 2	0.45	< 0.5	15	41	40	2.46	< 10	< 1	0.32	10	1.02	1630	2
N112765	205	226	< 0.2	1.61	< 2	900	< 0.5	< 2	0.34	< 0.5	12	56	58	2.15	< 10	< 1	0.25	10	0.84	815	2
N112766	205	226	< 0.2	0.89	< 2	550	< 0.5	< 2	0.93	< 0.5	12	53	45	1.86	< 10	< 1	0.26	< 10	0.68	2050	2
N112767	205	226	< 0.2	0.82	< 2	550	< 0.5	< 2	0.32	< 0.5	12	53	56	2.23	< 10	< 1	0.25	< 10	0.53	1015	1
N112768	205	226	< 0.2	0.98	< 2	380	< 0.5	< 2	0.21	< 0.5	8	86	70	1.66	< 10	< 1	0.21	< 10	0.41	605	1
N112769	205	226	< 0.2	0.86	< 2	590	< 0.5	< 2	0.59	< 0.5	7	107	38	1.39	< 10	< 1	0.14	< 10	0.53	785	2
N112770	205	226	< 0.2	0.89	< 2	410	< 0.5	< 2	0.93	< 0.5	7	98	53	1.45	< 10	< 1	0.12	< 10	0.43	625	1
N112771	205	226	< 0.2	1.27	2	630	< 0.5	< 2	0.32	< 0.5	7	51	75	1.87	< 10	< 1	0.25	< 10	0.51	355	3
N112772	205	226	0.4	1.30	8	540	< 0.5	< 2	0.47	< 0.5	8	67	73	2.19	< 10	< 1	0.21	< 10	0.66	1575	6
N112773	205	226	0.2	1.23	< 2	690	< 0.5	< 2	0.25	< 0.5	7	81	69	1.89	< 10	< 1	0.23	< 10	0.50	305	3
N112774	205	226	0.2	1.31	< 2	600	< 0.5	< 2	0.29	< 0.5	8	84	63	2.08	< 10	< 1	0.26	< 10	0.54	540	3
N112775	205	226	0.4	0.40	2	380	< 0.5	< 2	0.47	< 0.5	3	100	65	1.06	< 10	< 1	0.13	< 10	0.24	520	2
N112776	205	226	0.2	1.45	< 2	510	< 0.5	< 2	0.34	< 0.5	7	54	50	2.12	< 10	< 1	0.32	< 10	0.54	440	3
N112777	205	226	0.2	1.04	6	370	< 0.5	< 2	0.38	< 0.5	7	54	57	2.18	< 10	< 1	0.28	< 10	0.47	760	1
N112778	205	226	< 0.2	1.10	2	690	< 0.5	< 2	0.19	< 0.5	8	44	61	1.85	< 10	< 1	0.30	10	0.39	455	3
N112779	205	226	< 0.2	0.99	< 2	1230	< 0.5	< 2	0.26	< 0.5	6	46	52	1.53	< 10	< 1	0.24	10	0.36	530	1
N112780	205	226	< 0.2	1.55	< 2	1200	< 0.5	< 2	0.17	< 0.5	6	48	36	2.33	< 10	< 1	0.23	10	0.61	410	1
N112781	205	226	< 0.2	1.37	< 2	530	< 0.5	< 2	0.28	< 0.5	7	54	50	2.22	< 10	< 1	0.26	10	0.46	390	2
N112782	205	226	< 0.2	1.03	< 2	650	< 0.5	< 2	0.59	< 0.5	6	59	51	1.92	< 10	< 1	0.23	< 10	0.49	775	5
N112783	205	226	< 0.2	0.80	< 2	490	< 0.5	< 2	1.74	< 0.5	7	62	57	1.90	< 10	< 1	0.22	< 10	0.62	810	1
N112784	205	226	0.2	0.67	2	400	< 0.5	< 2	0.70	< 0.5	6	84	51	1.84	< 10	< 1	0.16	< 10	0.41	610	3
N112785	205	226	0.2	0.85	2	340	< 0.5	< 2	0.98	< 0.5	6	52	48	1.93	< 10	< 1	0.19	< 10	0.50	1110	2
N112786	205	226	0.2	1.02	< 2	420	< 0.5	< 2	1.09	< 0.5	6	65	52	1.95	< 10	< 1	0.19	< 10	0.40	660	1
N112787	205	226	< 0.2	0.98	4	520	< 0.5	< 2	1.43	< 0.5	5	55	57	1.74	< 10	< 1	0.18	< 10	0.44	840	1
N112788	205	226	< 0.2	1.30	< 2	580	< 0.5	< 2	0.80	< 0.5	7	59	61	2.07	< 10	< 1	0.22	< 10	0.55	565	2

CERTIFICATION:

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

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

Project : ICE-ID97-05
Comments:

Page Number : 2-B
Total Pages : 3
Certificate Date: 22-JUN-97
Invoice No. : I9727874
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9727874

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
N112699	205	226	0.02	22	270	< 2	< 2	7	73	< 0.01	< 10	< 10	33	< 10	80
N112700	205	226	0.03	26	140	< 2	< 2	4	38	< 0.01	< 10	< 10	25	< 10	64
N112751	205	226	< 0.01	21	100	2	< 2	3	18	< 0.01	< 10	< 10	31	< 10	52
N112752	205	226	< 0.01	19	140	< 2	< 2	3	26	< 0.01	< 10	< 10	27	< 10	86
N112753	205	226	0.02	62	240	< 2	< 2	5	80	< 0.01	< 10	10	36	< 10	104
N112754	205	226	< 0.01	14	50	6	< 2	2	23	< 0.01	< 10	< 10	19	< 10	70
N112755	205	226	< 0.01	17	40	4	< 2	2	37	< 0.01	< 10	< 10	17	< 10	38
N112756	205	226	< 0.01	23	80	4	< 2	3	31	< 0.01	< 10	< 10	24	< 10	46
N112757	205	226	< 0.01	15	80	2	< 2	3	98	< 0.01	< 10	< 10	24	< 10	34
N112758	205	226	< 0.01	33	130	6	< 2	3	47	< 0.01	< 10	< 10	25	< 10	58
N112759	205	226	< 0.01	23	100	12	< 2	2	10	< 0.01	< 10	< 10	17	< 10	64
N112760	205	226	< 0.01	22	140	14	< 2	2	11	< 0.01	< 10	< 10	12	< 10	42
N112761	205	226	< 0.01	27	190	< 2	< 2	2	8	< 0.01	< 10	< 10	13	< 10	62
N112762	205	226	< 0.01	37	210	< 2	< 2	2	19	< 0.01	< 10	< 10	16	< 10	68
N112763	205	226	< 0.01	40	260	6	< 2	3	34	< 0.01	< 10	< 10	17	< 10	74
N112764	205	226	< 0.01	45	270	6	< 2	3	29	< 0.01	< 10	< 10	22	< 10	82
N112765	205	226	< 0.01	39	250	12	< 2	3	23	< 0.01	< 10	< 10	20	< 10	68
N112766	205	226	< 0.01	32	240	6	< 2	3	36	< 0.01	< 10	< 10	17	< 10	58
N112767	205	226	< 0.01	35	180	4	< 2	3	14	< 0.01	< 10	< 10	16	< 10	72
N112768	205	226	< 0.01	25	190	12	< 2	2	10	< 0.01	< 10	< 10	19	< 10	50
N112769	205	226	< 0.01	22	110	6	< 2	1	23	< 0.01	< 10	< 10	12	< 10	38
N112770	205	226	< 0.01	19	100	6	< 2	1	22	< 0.01	< 10	< 10	12	< 10	36
N112771	205	226	< 0.01	29	130	8	< 2	1	13	< 0.01	< 10	< 10	19	< 10	72
N112772	205	226	< 0.01	30	130	8	< 2	3	20	0.03	< 10	< 10	32	< 10	96
N112773	205	226	< 0.01	31	100	6	< 2	1	14	< 0.01	< 10	< 10	21	< 10	78
N112774	205	226	< 0.01	34	120	8	< 2	2	11	< 0.01	< 10	< 10	22	< 10	88
N112775	205	226	< 0.01	27	70	6	< 2	1	16	< 0.01	< 10	< 10	12	< 10	50
N112776	205	226	< 0.01	34	170	8	< 2	1	11	< 0.01	< 10	< 10	20	< 10	94
N112777	205	226	< 0.01	37	200	10	< 2	1	12	< 0.01	< 10	< 10	18	< 10	96
N112778	205	226	< 0.01	32	200	12	< 2	1	9	< 0.01	< 10	< 10	18	< 10	88
N112779	205	226	< 0.01	25	160	6	< 2	2	10	< 0.01	< 10	< 10	18	< 10	62
N112780	205	226	< 0.01	32	290	2	2	3	11	< 0.01	< 10	< 10	22	< 10	66
N112781	205	226	< 0.01	33	230	4	< 2	3	11	< 0.01	< 10	< 10	24	< 10	92
N112782	205	226	< 0.01	31	190	6	< 2	2	14	< 0.01	< 10	< 10	19	< 10	72
N112783	205	226	< 0.01	28	100	6	< 2	4	23	< 0.01	< 10	< 10	23	< 10	74
N112784	205	226	< 0.01	28	130	6	< 2	2	13	< 0.01	< 10	< 10	16	< 10	106
N112785	205	226	< 0.01	29	170	6	< 2	2	20	< 0.01	< 10	< 10	15	< 10	74
N112786	205	226	< 0.01	27	160	8	< 2	1	17	< 0.01	< 10	< 10	16	< 10	82
N112787	205	226	< 0.01	29	200	6	2	2	25	< 0.01	< 10	< 10	17	< 10	74
N112788	205	226	< 0.01	31	230	6	< 2	1	21	< 0.01	< 10	< 10	20	< 10	78

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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CERTIFICATE OF ANALYSIS A9727874

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
N112789	205 226	0.2	0.78	< 2	620	< 0.5	< 2	0.44	< 0.5	4	126	62	1.34	< 10	< 1	0.10	< 10	0.43	415	1
N112790	205 226	< 0.2	0.68	< 2	490	< 0.5	< 2	0.29	< 0.5	5	115	72	1.32	< 10	< 1	0.10	< 10	0.35	395	3
N112791	205 226	< 0.2	1.55	< 2	780	< 0.5	< 2	0.32	< 0.5	12	81	71	2.37	< 10	< 1	0.24	10	0.74	745	2
N112792	205 226	0.2	1.25	4	440	< 0.5	< 2	0.44	< 0.5	7	67	56	2.43	< 10	< 1	0.17	< 10	0.73	750	3
N112793	205 226	0.2	1.15	8	530	< 0.5	< 2	0.42	< 0.5	7	64	60	2.02	< 10	< 1	0.23	10	0.48	460	3
N112794	205 226	< 0.2	1.02	2	770	< 0.5	< 2	0.34	< 0.5	8	109	64	1.48	< 10	< 1	0.16	10	0.52	540	4
N112795	205 226	< 0.2	1.06	8	760	< 0.5	< 2	4.36	< 0.5	8	60	50	1.55	< 10	< 1	0.15	< 10	0.62	4630	2
N112796	205 226	< 0.2	0.69	2	820	< 0.5	< 2	0.86	< 0.5	8	116	47	1.08	< 10	< 1	0.11	< 10	0.36	1350	1
N112797	205 226	< 0.2	0.88	< 2	740	< 0.5	< 2	0.32	< 0.5	6	100	59	1.34	< 10	< 1	0.12	< 10	0.48	465	< 1
N112798	205 226	< 0.2	0.90	< 2	540	< 0.5	< 2	0.58	< 0.5	8	65	73	1.73	< 10	< 1	0.16	< 10	0.53	520	2
N112799	205 226	< 0.2	1.14	2	510	< 0.5	< 2	0.34	< 0.5	8	41	73	1.99	< 10	< 1	0.18	10	0.52	465	4
N112800	205 226	< 0.2	0.87	< 2	550	< 0.5	< 2	0.31	< 0.5	5	70	61	1.41	< 10	< 1	0.14	10	0.43	295	3
N112801	205 226	< 0.2	0.51	< 2	700	< 0.5	< 2	0.31	< 0.5	4	100	65	0.92	< 10	< 1	0.07	< 10	0.28	235	2

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Analytical Chemists * Geochemists * Registered Assayers

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

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

Project : ICE-ID97-05
Comments:

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Total Pages : 3
Certificate Date: 22-JUN-97
Invoice No. : I9727874
P.O. Number :
Account : MPO

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9727874

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
N112789	205	226	< 0.01	40	150	6	< 2	1	18	< 0.01	< 10	< 10	12	< 10	64
N112790	205	226	< 0.01	27	60	6	< 2	1	7	< 0.01	< 10	< 10	13	< 10	40
N112791	205	226	< 0.01	39	270	< 2	< 2	3	11	< 0.01	< 10	< 10	20	< 10	74
N112792	205	226	< 0.01	38	150	12	< 2	1	11	< 0.01	< 10	< 10	17	< 10	100
N112793	205	226	< 0.01	32	200	10	< 2	2	14	< 0.01	< 10	< 10	21	< 10	78
N112794	205	226	< 0.01	48	160	6	< 2	1	17	< 0.01	< 10	< 10	18	< 10	82
N112795	205	226	< 0.01	61	260	4	< 2	2	135	< 0.01	< 10	< 10	20	< 10	136
N112796	205	226	< 0.01	33	320	12	< 2	1	36	< 0.01	< 10	< 10	13	< 10	62
N112797	205	226	< 0.01	33	140	10	< 2	1	14	< 0.01	< 10	< 10	16	< 10	64
N112798	205	226	< 0.01	33	130	10	< 2	1	23	< 0.01	< 10	< 10	16	< 10	86
N112799	205	226	< 0.01	30	130	10	< 2	1	9	< 0.01	< 10	< 10	16	< 10	84
N112800	205	226	< 0.01	28	90	6	< 2	1	14	< 0.01	< 10	< 10	14	< 10	64
N112801	205	226	< 0.01	21	60	2	< 2	< 1	15	< 0.01	< 10	< 10	10	< 10	44

CERTIFICATION: Stuart Bichler

* INTERFERENCES: Cu on Bi and P

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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
1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-03
Comments:

Page Number :1
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Certificate Date: 07-JUN-97
Invoice No. :19726292
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9726292

SAMPLE	PREP CODE	Cu %
N112628	244 --	1.31

CERTIFICATION: Said Ceinad

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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
1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID9704
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 12-JUN-97
Invoice No. : I9726264
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9726264

SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N112642	208	276	445	2.37	8	0.20	80	40	< 5	< 10	1.38	< 5	715	70	23600	26.7	< 10	0.01	0.56	390	40
N112643	208	276	240	3.14	41	0.13	40	20	< 5	< 10	0.68	< 5	700	70	31800	25.7	< 10	0.01	0.35	260	40
N112644	208	276	175	2.60	18	0.26	50	60	< 5	< 10	2.97	5	400	60	26500	23.0	< 10	0.01	1.36	780	20

CERTIFICATION: Ian Bichler

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

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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID9704
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 12-JUN-97
Invoice No. : 19726264
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9726264

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	Spec Gr S.G.
N112642	208	276	0.02	20	500	95	< 10	< 5	10	< 0.01	< 20	< 20	20	< 20	330	3.54
N112643	208	276	0.01	15	< 100	65	< 10	< 5	5	< 0.01	< 20	< 20	< 20	< 20	330	3.50
N112644	208	276	0.01	320	< 100	30	< 10	< 5	30	< 0.01	< 20	< 20	< 20	< 20	685	3.40

CERTIFICATION: Ian Bidder

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

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VANCOUVER, BC
V6B 1L8

Project : ICE-ID9704
Comments:

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Total Pages : 1
Certificate Date: 17-JUN-97
Invoice No. : I9726261
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9726261

SAMPLE	PREP CODE		Spec Gr S.G.	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
N112638	205	226	-----	< 0.2	3.66	< 2	50	< 0.5	< 2	2.78	< 0.5	28	37	72	6.25	10	1	< 0.01	< 10	2.19	900
N112639	205	226	-----	< 0.2	3.97	4	60	< 0.5	< 2	3.44	< 0.5	26	51	59	6.46	10	< 1	< 0.01	< 10	2.35	1045
N112640	205	226	2.77	< 0.2	4.72	6	60	< 0.5	< 2	2.56	< 0.5	36	121	74	9.04	10	1	0.01	< 10	3.21	1135
N112641	205	226	2.70	0.4	2.45	8	100	< 0.5	< 2	0.62	0.5	55	151	257	10.60	10	< 1	0.03	< 10	1.20	415
N112645	205	226	2.70	< 0.2	3.60	< 2	110	< 0.5	< 2	2.80	< 0.5	34	217	471	8.94	< 10	< 1	0.05	< 10	2.32	705
N112646	205	226	2.74	0.8	3.62	< 2	90	< 0.5	< 2	2.51	< 0.5	54	225	1170	9.54	10	1	0.08	< 10	2.70	640
N112647	205	226	-----	< 0.2	4.09	6	1220	< 0.5	< 2	2.89	< 0.5	29	242	411	8.87	10	< 1	0.07	< 10	3.33	815
N112648	205	226	-----	0.8	3.63	< 2	100	< 0.5	2	2.84	0.5	42	117	499	7.66	10	< 1	0.03	< 10	3.47	895
N112649	205	226	-----	0.2	4.07	< 2	120	< 0.5	< 2	3.29	0.5	36	108	289	8.24	10	2	0.05	< 10	3.78	995
N112650	205	226	-----	0.6	3.50	2	80	< 0.5	2	2.43	< 0.5	53	100	1730	8.95	10	< 1	0.14	< 10	2.97	965
N112651	205	226	-----	< 0.2	3.99	< 2	300	< 0.5	< 2	2.72	< 0.5	44	126	330	8.48	10	1	0.09	< 10	3.55	1160
N112652	205	226	-----	0.2	2.32	< 2	60	< 0.5	< 2	6.38	0.5	149	69	4080	9.00	< 10	< 1	0.11	< 10	3.67	850
N112653	205	226	-----	0.2	2.94	< 2	140	< 0.5	2	5.98	< 0.5	63	98	2390	8.77	< 10	< 1	0.09	< 10	3.25	910
N112654	205	226	-----	0.2	2.72	< 2	200	< 0.5	2	10.00	0.5	64	62	812	7.46	10	1	0.04	< 10	4.09	1410
N112655	205	226	-----	< 0.2	3.00	< 2	190	< 0.5	< 2	8.12	< 0.5	90	88	209	8.23	10	1	0.05	< 10	3.84	1270
N112656	205	226	-----	0.2	1.24	< 2	190	< 0.5	< 2	11.00	0.5	127	50	526	7.96	< 10	< 1	0.05	< 10	4.11	1525
N112657	205	226	-----	1.0	3.93	2	90	< 0.5	< 2	3.41	0.5	65	129	1575	8.78	< 10	< 1	0.10	< 10	2.23	785
N112658	205	226	-----	< 0.2	2.94	< 2	30	< 0.5	< 2	0.91	< 0.5	41	22	103	6.88	10	< 1	0.06	< 10	1.52	405

CERTIFICATION: Stuart Bichler

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

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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID9704
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 17-JUN-97
Invoice No. : I9726261
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9726261

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N112638	205	226	< 1	0.01	35	470	< 2	< 2	8	17	0.49	< 10	< 10	174	< 10	82
N112639	205	226	< 1	0.03	32	460	< 2	< 2	12	25	0.50	< 10	< 10	196	< 10	76
N112640	205	226	< 1	0.01	48	500	< 2	< 2	33	37	0.24	< 10	< 10	245	< 10	106
N112641	205	226	1	< 0.01	53	950	16	< 2	13	12	< 0.01	< 10	< 10	265	< 10	762
N112645	205	226	< 1	0.03	59	280	< 2	< 2	22	28	< 0.01	< 10	< 10	149	< 10	246
N112646	205	226	< 1	0.04	45	320	10	< 2	20	26	< 0.01	< 10	< 10	218	< 10	364
N112647	205	226	< 1	0.03	41	300	2	4	23	43	< 0.01	< 10	< 10	202	< 10	362
N112648	205	226	< 1	0.03	52	410	< 2	< 2	30	26	0.43	< 10	< 10	255	< 10	944
N112649	205	226	< 1	0.01	48	380	< 2	< 2	28	26	0.47	< 10	< 10	249	< 10	664
N112650	205	226	< 1	0.03	46	320	2	< 2	18	38	0.37	< 10	< 10	179	< 10	196
N112651	205	226	< 1	0.03	53	350	< 2	2	31	35	0.26	< 10	< 10	211	< 10	122
N112652	205	226	3	0.02	31	170	4	< 2	19	79	0.01	< 10	< 10	137	< 10	400
N112653	205	226	< 1	< 0.01	29	240	2	< 2	21	59	< 0.01	< 10	< 10	141	< 10	206
N112654	205	226	< 1	< 0.01	32	250	2	< 2	23	111	< 0.01	< 10	< 10	128	< 10	274
N112655	205	226	< 1	< 0.01	49	270	< 2	2	25	95	< 0.01	< 10	< 10	114	< 10	172
N112656	205	226	< 1	< 0.01	21	140	4	2	13	122	< 0.01	< 10	< 10	82	< 10	272
N112657	205	226	< 1	0.01	53	370	< 2	< 2	23	31	< 0.01	< 10	< 10	161	< 10	364
N112658	205	226	< 1	0.04	37	520	< 2	2	23	16	< 0.01	< 10	< 10	277	< 10	214

CERTIFICATION: Stewart Bradley

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

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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-02
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 14-JUN-97
Invoice No. : I9725619
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9725619

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N111882	208	226	395	8	0.46	30	220	< 5	< 10	0.44	< 5	475	100	26900	>30.0	< 10	0.11	0.19	260	25	0.03
N111883	208	226	490	9	0.10	30	< 20	< 5	10	0.21	5	555	70	23800	>30.0	< 10	0.03	0.07	70	30	0.04
N111884	208	226	620	12	< 0.01	20	20	< 5	20	0.95	20	740	60	22800	>30.0	< 10	0.01	0.01	100	40	0.03
N111885	208	226	530	10	0.01	30	< 20	< 5	10	0.49	75	625	80	16120	>30.0	10	0.01	0.07	90	40	0.03
N111892	208	226	25	1	2.57	< 10	380	< 5	10	0.28	< 5	205	110	7720	22.3	< 10	0.01	2.05	280	5	0.03
N111893	208	226	80	4	1.82	10	20	< 5	< 10	0.15	< 5	215	100	23000	18.40	< 10	< 0.01	1.36	160	25	0.03
N111894	208	226	40	2	3.86	< 10	20	< 5	< 10	0.63	< 5	235	100	12350	21.7	< 10	< 0.01	2.91	350	5	0.03
N111895	208	226	50	1	3.81	10	< 20	< 5	< 10	0.18	< 5	180	100	10160	19.45	< 10	< 0.01	2.70	300	5	0.03
N111896	208	226	50	1	3.30	< 10	40	< 5	10	0.30	< 5	185	100	10560	19.45	< 10	< 0.01	2.26	270	5	0.02
N111897	208	226	130	4	1.86	10	20	< 5	< 10	0.28	< 5	155	120	28100	16.65	< 10	< 0.01	1.47	160	20	0.03
N111898	208	226	30	< 1	3.81	10	< 20	< 5	10	0.23	< 5	180	120	5750	18.35	< 10	< 0.01	2.73	290	< 5	0.03
N111899	208	226	40	< 1	4.55	< 10	< 20	< 5	< 10	0.25	< 5	140	120	1785	19.45	< 10	< 0.01	3.29	340	5	0.02
N111900	208	226	40	1	3.80	< 10	20	< 5	< 10	0.21	< 5	200	120	6180	20.6	< 10	< 0.01	2.82	290	5	0.02
N112601	208	226	30	1	2.15	< 10	380	< 5	10	0.17	< 5	255	90	16920	22.7	< 10	0.01	1.52	180	5	0.03
N112602	208	226	30	< 1	1.19	< 10	20	< 5	10	0.15	< 5	205	70	11890	23.9	< 10	< 0.01	0.86	100	15	0.03
N112603	208	226	35	< 1	2.09	< 10	60	< 5	10	0.11	< 5	390	70	5300	26.4	< 10	< 0.01	1.59	180	15	0.03
N112604	208	226	45	< 1	1.78	< 10	< 20	< 5	20	0.10	< 5	450	80	7710	29.9	< 10	< 0.01	1.35	170	20	0.03
N112605	208	226	25	< 1	1.70	10	220	< 5	20	0.26	< 5	515	90	5960	>30.0	< 10	< 0.01	1.24	180	< 5	0.03
N112606	208	226	15	< 1	1.64	< 10	< 20	< 5	20	0.07	< 5	460	80	5830	29.7	< 10	< 0.01	1.20	150	< 5	0.03
N112607	208	226	< 5	< 1	1.81	< 10	< 20	< 5	10	0.09	< 5	460	100	4000	28.3	< 10	< 0.01	1.44	220	< 5	0.03
N112608	208	226	25	< 1	1.93	10	< 20	< 5	10	0.05	< 5	270	90	1750	27.1	< 10	< 0.01	1.51	200	< 5	0.03
N112609	208	226	< 5	< 1	2.00	< 10	< 20	< 5	10	0.18	< 5	190	90	2710	27.1	< 10	< 0.01	1.58	190	5	0.03
N112610	208	226	30	< 1	1.98	10	< 20	< 5	10	0.22	< 5	400	90	9220	24.5	< 10	< 0.01	1.60	210	15	0.03
N112611	208	226	30	< 1	2.99	< 10	< 20	< 5	< 10	0.33	< 5	140	140	6670	15.25	< 10	< 0.01	3.00	250	5	0.03
N112612	208	226	25	< 1	3.09	< 10	20	< 5	10	0.11	< 5	150	90	2280	28.4	< 10	< 0.01	2.66	240	< 5	0.03
N112613	208	226	15	5	1.51	< 10	< 20	< 5	10	0.27	< 5	95	150	9830	16.60	< 10	< 0.01	1.32	110	< 5	0.03
N112614	208	226	40	1	2.26	< 10	< 20	< 5	< 10	0.17	5	130	130	3530	17.05	< 10	< 0.01	1.94	190	< 5	0.03
N112615	208	226	< 5	< 1	2.72	< 10	< 20	< 5	< 10	0.33	< 5	90	130	1155	14.45	< 10	< 0.01	2.39	240	< 5	0.03
N112616	208	226	< 5	< 1	2.42	10	< 20	< 5	< 10	0.07	5	110	120	3430	17.85	< 10	< 0.01	1.98	200	< 5	0.03
N112617	208	226	< 5	< 1	2.08	< 10	< 20	< 5	10	0.35	< 5	85	90	1085	17.55	< 10	< 0.01	1.61	220	< 5	0.03
N112618	208	226	20	< 1	2.77	< 10	20	< 5	< 10	0.27	10	115	110	820	15.45	< 10	< 0.01	2.63	210	< 5	0.03
N112619	208	226	10	< 1	4.82	< 10	220	< 5	10	0.11	5	145	120	2140	17.80	< 10	0.02	4.51	620	< 5	0.03

CERTIFICATION: Stuart Bichler

Chemex Labs Ltd.

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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-02
Comments:

Certificate Date: 14-JUN-97
Invoice No. :19725619
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9725619

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N111882	208	226	15	1600	65	< 10	< 5	5	< 0.01	< 20	< 20	80	< 20	215	2.91	3.89
N111883	208	226	20	< 100	70	10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	1045	2.53	4.06
N111884	208	226	25	< 100	60	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	2520	2.46	3.96
N111885	208	226	25	< 100	65	< 10	< 5	< 5	< 0.01	< 20	20	< 20	< 20	14180	1.73	4.13
N111892	208	226	30	< 100	15	< 10	10	< 5	0.06	< 20	< 20	100	< 20	380	0.83	3.36
N111893	208	226	20	< 100	10	< 10	5	< 5	0.05	< 20	< 20	80	< 20	1080	2.46	3.20
N111894	208	226	25	100	35	< 10	20	< 5	0.09	< 20	< 20	160	< 20	300	1.33	3.21
N111895	208	226	30	100	30	< 10	20	< 5	0.08	< 20	< 20	120	< 20	1245	1.09	3.15
N111896	208	226	35	100	25	< 10	15	< 5	0.09	< 20	< 20	120	< 20	165	1.20	3.13
N111897	208	226	25	< 100	35	10	5	< 5	0.06	< 20	< 20	80	< 20	1510	3.00	3.06
N111898	208	226	30	100	< 5	< 10	20	< 5	0.10	< 20	< 20	120	< 20	765	0.63	3.06
N111899	208	226	40	300	10	< 10	25	< 5	0.16	< 20	< 20	180	< 20	960	0.20	3.07
N111900	208	226	30	100	5	< 10	20	< 5	0.12	< 20	< 20	140	< 20	1325	0.69	3.15
N112601	208	226	25	< 100	15	10	10	5	0.04	< 20	< 20	80	< 20	365	1.86	3.34
N112602	208	226	15	< 100	20	< 10	< 5	< 5	0.04	< 20	< 20	60	< 20	195	1.30	3.57
N112603	208	226	25	< 100	15	< 10	5	< 5	0.04	< 20	< 20	80	< 20	385	0.59	3.56
N112604	208	226	25	< 100	85	< 10	5	< 5	0.03	< 20	< 20	60	< 20	250	0.86	3.74
N112605	208	226	20	< 100	40	< 10	5	< 5	0.05	< 20	< 20	60	< 20	740	0.66	3.77
N112606	208	226	25	< 100	20	< 10	5	< 5	0.05	< 20	< 20	80	< 20	120	0.64	3.72
N112607	208	226	20	< 100	5	< 10	5	< 5	0.05	< 20	< 20	80	< 20	235	0.44	3.60
N112608	208	226	20	< 100	10	< 10	5	< 5	0.07	< 20	< 20	100	< 20	320	0.20	3.52
N112609	208	226	25	< 100	25	< 10	5	< 5	0.09	< 20	< 20	100	< 20	205	0.28	3.43
N112610	208	226	35	< 100	40	< 10	5	< 5	0.03	< 20	< 20	80	< 20	355	1.00	3.40
N112611	208	226	25	< 100	20	< 10	15	< 5	0.03	< 20	< 20	120	< 20	925	0.71	2.96
N112612	208	226	25	< 100	5	< 10	15	< 5	0.14	< 20	< 20	120	< 20	765	0.25	3.40
N112613	208	226	15	< 100	30	< 10	5	< 5	0.05	< 20	< 20	40	< 20	1390	1.07	3.05
N112614	208	226	20	< 100	25	< 10	5	< 5	0.05	< 20	< 20	60	< 20	2700	0.39	3.05
N112615	208	226	20	< 100	45	< 10	15	< 5	0.07	< 20	< 20	100	< 20	915	0.13	2.91
N112616	208	226	20	< 100	5	< 10	10	< 5	0.04	< 20	< 20	80	< 20	1325	0.30	3.02
N112617	208	226	20	< 100	20	< 10	5	5	0.04	< 20	< 20	80	< 20	745	0.12	3.00
N112618	208	226	25	< 100	20	< 10	10	5	0.05	< 20	< 20	100	< 20	3570	0.09	2.97
N112619	208	226	35	100	10	< 10	25	< 5	0.06	< 20	< 20	240	< 20	1265	0.24	2.99

CERTIFICATION: Ito H. Bidlan

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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
1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-02
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CERTIFICATE OF ANALYSIS A9725618

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
N111880	205	226	< 0.2	5.04	< 2	1370	< 0.5	< 2	1.07	< 0.5	35	65	247	>15.00	20	< 1	0.21	< 10	1.77	1030	< 1
N111881	205	226	< 0.2	2.07	< 2	2240	< 0.5	< 2	1.11	< 0.5	12	87	410	15.00	10	< 1	0.38	20	0.81	1005	< 1
N111886	205	226	1.0	3.38	< 2	80	< 0.5	< 2	2.22	< 0.5	70	126	9210	7.23	10	< 1	0.08	< 10	2.44	695	1
N111887	205	226	< 0.2	3.69	< 2	80	< 0.5	< 2	1.95	< 0.5	30	137	524	6.10	10	1	0.13	< 10	2.81	770	< 1
N111888	205	226	< 0.2	4.17	< 2	90	< 0.5	< 2	2.66	< 0.5	26	142	756	5.58	10	< 1	0.12	< 10	2.80	805	< 1
N111889	205	226	< 0.2	4.35	< 2	430	< 0.5	< 2	2.22	< 0.5	29	119	198	6.30	10	< 1	0.09	< 10	5.08	1245	< 1
N111890	205	226	< 0.2	3.45	< 2	380	< 0.5	< 2	3.09	< 0.5	31	75	194	6.38	10	< 1	0.03	< 10	2.31	690	< 1
N111891	205	226	< 0.2	3.74	< 2	170	< 0.5	< 2	3.28	< 0.5	34	91	396	6.47	10	< 1	0.05	< 10	3.65	920	< 1
N112600	205	226	< 0.2	3.46	< 2	250	< 0.5	< 2	4.71	< 0.5	40	69	117	8.78	10	< 1	0.03	< 10	2.54	1490	< 1
N112620	205	226	< 0.2	6.55	< 2	150	< 0.5	< 2	0.26	6.5	108	167	1525	12.70	10	< 1	0.01	< 10	6.40	830	< 1
N112621	205	226	< 0.2	6.35	< 2	30	< 0.5	4	1.50	< 0.5	70	186	98	9.45	10	< 1	0.01	< 10	7.47	815	< 1
N112622	205	226	0.2	5.44	< 2	30	< 0.5	< 2	0.92	1.5	95	190	1485	11.40	10	1	< 0.01	< 10	5.30	830	< 1

CERTIFICATION: Stuart Bichler

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

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VANCOUVER, BC
V6B 1L8

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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	ZnSpec ppm	Gr S.G.
N111880	205	226	< 0.01	51	410	< 2	< 2	24	37	< 0.01	< 10	< 10	260	< 10	380	2.94
N111881	205	226	0.05	30	2920	6	< 2	5	146	0.03	< 10	< 10	317	< 10	250	2.90
N111886	205	226	0.04	43	280	12	< 2	9	29	0.16	< 10	< 10	120	< 10	434	2.99
N111887	205	226	0.04	45	420	< 2	< 2	10	20	0.25	< 10	< 10	131	< 10	384	2.84
N111888	205	226	0.04	52	240	< 2	< 2	11	25	0.26	< 10	< 10	128	< 10	258	2.88
N111889	205	226	< 0.01	42	390	< 2	< 2	15	25	0.39	< 10	< 10	125	< 10	210	2.82
N111890	205	226	0.05	45	300	< 2	< 2	10	18	0.32	< 10	< 10	166	< 10	100	2.94
N111891	205	226	0.01	40	320	< 2	< 2	19	29	0.31	< 10	< 10	200	< 10	142	2.81
N112600	205	226	0.03	39	620	< 2	< 2	28	50	0.39	< 10	< 10	302	< 10	154	2.80
N112620	205	226	< 0.01	54	260	< 2	< 2	27	4	0.01	< 10	< 10	222	< 10	1775	2.83
N112621	205	226	< 0.01	51	260	< 2	< 2	23	13	0.05	< 10	< 10	197	< 10	200	2.78
N112622	205	226	< 0.01	54	240	2	< 2	22	12	0.17	< 10	< 10	208	< 10	674	2.85

CERTIFICATION: Ian J. Bridden

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

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SAMPLE	PREP CODE		Au ppb FA+AA	Cu %	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm
N112626	208	226	350	2.84	8	< 0.01	20	40	< 5	10	1.68	< 5	495	60	27600	>30.0	< 10	0.01	0.03	180	25
N112627	208	226	505	1.68	7	0.35	30	< 20	< 5	30	0.82	10	920	70	16040	>30.0	< 10	0.05	0.23	150	25

CERTIFICATION: Hart Bichler

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

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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	Spec Gr S.G.
N112626	208	226	0.03	10	< 100	65	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	780	4.21
N112627	208	226	0.03	10	< 100	70	< 10	< 5	5	< 0.01	< 20	< 20	40	< 20	4650	4.08

CERTIFICATION: Stewart Bradley

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

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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
N112623	205	226	< 0.2	3.93	< 2	30	< 0.5	< 2	3.04	< 0.5	24	44	90	5.35	10	< 1	< 0.01	< 10	1.93	880	< 1
N112624	205	226	< 0.2	3.08	< 2	40	< 0.5	< 2	4.70	< 0.5	23	38	74	4.55	10	< 1	0.01	< 10	1.78	945	< 1
N112625	205	226	< 0.2	3.12	< 2	40	< 0.5	4	4.32	< 0.5	28	84	92	5.75	10	< 1	< 0.01	< 10	2.29	1125	< 1
N112628	205	226	3.6	1.60	12	10	< 0.5	Intf*	4.64	4.0	138	61	>10000	>15.00	20	< 1	< 0.01	< 10	1.21	540	4
N112629	205	226	< 0.2	3.45	< 2	30	< 0.5	< 2	2.67	< 0.5	21	99	437	5.16	10	< 1	0.08	< 10	2.34	645	< 1
N112630	205	226	< 0.2	4.00	< 2	130	< 0.5	< 2	3.39	< 0.5	26	118	336	4.76	10	1	0.11	< 10	2.45	770	< 1
N112631	205	226	< 0.2	3.98	< 2	40	< 0.5	< 2	3.40	< 0.5	24	92	120	3.86	10	< 1	0.16	< 10	2.08	795	< 1
N112632	205	226	< 0.2	3.84	< 2	50	< 0.5	< 2	3.74	< 0.5	29	103	215	6.33	10	< 1	0.07	< 10	2.62	990	< 1
N112633	205	226	< 0.2	3.94	< 2	140	< 0.5	< 2	4.47	0.5	30	74	156	6.28	10	< 1	0.08	< 10	3.40	990	< 1
N112634	205	226	< 0.2	6.50	< 2	10	< 0.5	10	0.87	< 0.5	72	116	949	11.00	10	1	0.02	< 10	6.59	1205	< 1
N112635	205	226	0.8	5.63	< 2	30	< 0.5	< 2	0.83	< 0.5	88	97	2180	12.20	10	< 1	< 0.01	< 10	4.98	880	1
N112636	205	226	< 0.2	4.06	< 2	50	< 0.5	< 2	3.75	< 0.5	26	42	69	5.87	10	< 1	0.01	< 10	2.32	725	< 1
N112637	205	226	< 0.2	3.50	< 2	40	< 0.5	< 2	2.77	< 0.5	29	46	156	5.57	10	< 1	0.01	< 10	2.26	745	< 1

CERTIFICATION: Hart Bichler

*INTERFERENCE: Cu ON Bi AND P.

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.
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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

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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	Spec Gr S.G.
N112623	205	226	0.04	39	370	< 2	< 2	7	12	0.43	< 10	< 10	154	< 10	68	2.97
N112624	205	226	0.02	36	340	< 2	< 2	7	24	0.43	< 10	< 10	140	< 10	60	2.92
N112625	205	226	< 0.01	46	400	< 2	< 2	15	29	0.44	< 10	< 10	175	< 10	78	2.87
N112628	205	226	< 0.01	26	Intf*	66	< 2	3	20	0.05	< 10	< 10	243	< 10	1700	3.53
N112629	205	226	0.04	46	300	< 2	< 2	5	15	0.18	< 10	< 10	131	< 10	258	2.89
N112630	205	226	0.04	64	250	< 2	< 2	9	26	0.25	< 10	< 10	131	< 10	132	2.88
N112631	205	226	0.03	57	220	< 2	< 2	7	18	0.25	< 10	< 10	110	< 10	66	-----
N112632	205	226	0.04	51	360	< 2	< 2	10	21	0.41	< 10	< 10	140	< 10	246	-----
N112633	205	226	0.02	44	570	< 2	< 2	14	27	0.38	< 10	< 10	157	< 10	344	-----
N112634	205	226	< 0.01	41	300	< 2	2	27	5	0.35	< 10	< 10	263	< 10	300	-----
N112635	205	226	< 0.01	36	210	4	2	26	5	0.30	< 10	< 10	202	< 10	108	-----
N112636	205	226	0.01	27	370	< 2	< 2	10	15	0.38	< 10	< 10	177	< 10	84	-----
N112637	205	226	0.08	31	350	< 2	< 2	8	13	0.35	< 10	< 10	153	< 10	68	-----

CERTIFICATION: Stan Bubler

*INTERFERENCE: Cu ON Bi AND P.

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

To: EXPATRIATE RESOURCES LTD.
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VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-01
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Invoice No. : I9724670
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CERTIFICATE OF ANALYSIS A9724670

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N112551	208	226	-----	< 1	3.46	30	100	< 5	< 10	2.98	< 5	40	40	95	7.72	< 10	0.03	3.13	1310	< 5	0.04
N112552	208	226	-----	< 1	3.83	< 10	60	< 5	< 10	2.73	< 5	45	90	145	8.51	< 10	0.04	3.56	1440	< 5	0.04
N112553	208	226	-----	< 1	3.38	< 10	60	< 5	< 10	2.67	< 5	45	80	70	7.44	< 10	0.01	3.29	1370	< 5	0.03
N112554	208	226	630	16	0.15	50	< 20	< 5	40	0.10	20	1015	10	47200	>30.0	< 10	< 0.01	0.11	100	55	0.03
N112555	208	226	575	13	0.11	40	< 20	< 5	< 10	0.06	35	920	30	23300	>30.0	< 10	0.01	0.06	40	25	0.03
N112556	208	226	540	11	0.05	10	< 20	< 5	< 10	0.03	5	760	90	18680	>30.0	10	0.01	0.01	40	25	0.03
N112557	208	226	610	16	0.03	40	< 20	< 5	< 10	0.02	10	1315	40	22100	>30.0	< 10	0.01	< 0.01	50	35	0.03
N112558	208	226	690	30	0.05	40	< 20	< 5	70	0.04	20	1070	140	23400	>30.0	< 10	0.01	< 0.01	150	30	0.03
N112559	208	226	670	23	0.03	40	< 20	< 5	< 10	0.02	10	820	80	22200	>30.0	10	0.01	< 0.01	50	30	0.03
N112560	208	226	-----	< 1	3.44	30	240	< 5	< 10	4.25	< 5	35	150	230	6.39	< 10	0.13	3.18	1250	< 5	0.06
N112561	208	226	-----	1	3.64	< 10	620	< 5	< 10	2.17	< 5	100	130	2300	14.60	< 10	0.12	3.67	850	5	0.05
N112562	208	226	-----	< 1	4.07	< 10	3180	< 5	< 10	4.19	< 5	70	110	605	10.25	< 10	0.12	3.90	1030	< 5	0.04
N112563	208	226	-----	1	5.36	< 10	400	< 5	< 10	0.69	< 5	120	150	3020	16.65	< 10	0.09	5.22	1070	5	0.03
N112564	208	226	35	1	0.82	< 10	100	< 5	< 10	0.13	< 5	220	140	1505	24.5	< 10	0.01	0.64	90	20	0.03
N112565	208	226	35	< 1	1.46	10	100	< 5	< 10	0.14	< 5	180	140	850	17.75	< 10	0.01	1.15	140	10	0.03
N112566	208	226	25	1	0.86	< 10	120	< 5	< 10	0.05	< 5	220	140	1040	>30.0	< 10	0.01	0.66	70	15	0.03
N112567	208	226	20	1	0.67	< 10	200	< 5	10	0.08	< 5	165	120	4350	25.9	< 10	0.01	0.50	60	20	0.03
N112568	208	226	35	1	1.15	< 10	1020	< 5	< 10	0.26	< 5	195	140	2420	20.9	< 10	0.05	0.91	100	5	0.04
N112569	208	226	85	1	1.41	10	400	< 5	< 10	0.05	< 5	165	100	2000	18.95	< 10	0.01	1.11	90	5	0.03
N112570	208	226	100	1	1.35	< 10	180	< 5	< 10	0.15	< 5	130	120	3160	21.5	< 10	0.01	1.00	100	15	0.03
N112571	208	226	200	3	0.63	20	140	< 5	< 10	0.11	< 5	270	90	8570	23.2	< 10	0.01	0.47	50	45	0.03
N112572	208	226	95	1	0.61	10	180	< 5	< 10	0.06	< 5	180	170	5810	22.3	< 10	0.01	0.44	40	25	0.03
N112573	208	226	100	2	1.04	30	300	< 5	10	0.02	< 5	250	130	7570	24.2	< 10	0.01	0.73	70	20	0.03
N112574	208	226	110	2	1.04	20	180	< 5	40	0.05	< 5	250	150	8410	24.0	< 10	0.01	0.74	110	25	0.03
N112575	208	226	80	1	0.62	10	220	< 5	< 10	0.08	10	150	130	8130	17.45	< 10	0.01	0.45	50	25	0.03
N112576	208	226	130	3	0.58	< 10	100	< 5	< 10	0.06	< 5	420	150	16910	29.9	< 10	0.01	0.41	40	60	0.03
N112577	208	226	65	2	0.78	20	100	< 5	< 10	0.08	< 5	290	120	13220	26.9	< 10	0.01	0.53	50	75	0.03
N112578	208	226	70	4	0.67	< 10	220	< 5	< 10	0.03	< 5	695	130	22600	29.0	< 10	0.01	0.45	50	50	0.03
N112579	208	226	85	5	0.32	10	320	< 5	< 10	0.08	< 5	695	240	10570	>30.0	10	0.01	0.23	40	25	0.04
N112580	208	226	45	2	1.12	< 10	160	< 5	< 10	0.09	< 5	415	110	10300	28.1	< 10	0.01	0.79	100	45	0.03
N112581	208	226	90	3	1.56	10	60	< 5	< 10	0.03	< 5	290	130	11610	27.6	< 10	0.01	1.20	110	20	0.03
N112582	208	226	180	5	1.40	< 10	20	< 5	< 10	0.06	10	275	110	28600	23.7	< 10	< 0.01	1.15	130	35	0.03
N112583	208	226	10	< 1	4.12	< 10	< 20	< 5	< 10	2.05	< 5	135	110	815	24.5	< 10	< 0.01	4.67	430	5	0.03
N112584	208	226	10	1	3.52	10	< 20	< 5	10	2.96	< 5	135	100	635	21.6	< 10	< 0.01	3.78	390	5	0.03
N112585	208	226	< 5	< 1	2.89	< 10	< 20	< 5	< 10	10.80	< 5	95	90	85	20.7	< 10	< 0.01	2.99	720	< 5	0.03
N112586	208	226	5	< 1	3.88	< 10	< 20	< 5	< 10	6.44	< 5	115	110	385	27.2	< 10	< 0.01	4.14	590	< 5	0.02
N112587	208	226	10	< 1	3.71	10	20	< 5	< 10	7.34	< 5	125	100	475	29.9	< 10	< 0.01	3.89	600	< 5	0.02
N112588	208	226	35	2	3.08	10	< 20	< 5	< 10	0.62	< 5	185	90	4200	26.1	< 10	< 0.01	3.16	230	10	0.02
N112589	208	226	40	1	1.65	< 10	< 20	< 5	< 10	0.59	< 5	95	120	1595	19.45	< 10	< 0.01	1.54	110	20	0.03
N112590	208	226	20	1	2.31	< 10	< 20	< 5	< 10	0.15	< 5	95	130	1160	17.00	< 10	0.01	2.06	140	15	0.03

CERTIFICATION: Hart Bichler

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
1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-01
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CERTIFICATE OF ANALYSIS A9724670

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N112551	208	226	45	500	90	< 10	10	20	0.48	< 20	< 20	200	< 20	120	-----	2.89
N112552	208	226	55	600	20	< 10	20	30	0.56	< 20	< 20	220	< 20	270	-----	2.79
N112553	208	226	50	500	5	< 10	15	50	0.73	< 20	< 20	220	< 20	300	-----	2.91
N112554	208	226	30	500	100	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	5700	4.54	4.30
N112555	208	226	35	300	90	< 10	< 5	< 5	< 0.01	20	< 20	< 20	< 20	14450	2.16	4.06
N112556	208	226	20	200	95	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	1930	1.75	3.92
N112557	208	226	15	400	75	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	1105	2.10	3.99
N112558	208	226	20	200	70	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	2070	2.23	3.89
N112559	208	226	15	100	80	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	1960	2.11	3.95
N112560	208	226	60	300	10	< 10	20	30	0.31	< 20	< 20	180	< 20	135	-----	2.75
N112561	208	226	50	300	10	< 10	20	20	0.11	< 20	< 20	180	< 20	475	-----	2.96
N112562	208	226	75	400	10	< 10	25	30	0.32	< 20	< 20	180	< 20	670	-----	2.83
N112563	208	226	55	300	25	< 10	25	5	0.11	< 20	< 20	240	< 20	1235	-----	2.90
N112564	208	226	15	< 100	20	< 10	< 5	< 5	0.04	< 20	< 20	40	< 20	755	0.14	3.27
N112565	208	226	20	< 100	20	< 10	5	< 5	0.05	< 20	< 20	60	< 20	1195	0.08	3.05
N112566	208	226	15	< 100	25	< 10	< 5	< 5	0.03	20	< 20	40	< 20	190	0.09	3.40
N112567	208	226	10	< 100	15	< 10	< 5	< 5	0.01	< 20	< 20	40	< 20	1140	0.42	3.26
N112568	208	226	20	< 100	20	< 10	5	35	0.02	< 20	< 20	60	< 20	350	0.23	3.17
N112569	208	226	25	< 100	45	< 10	5	5	0.01	< 20	< 20	60	< 20	700	0.19	3.15
N112570	208	226	20	< 100	65	10	5	5	0.02	< 20	< 20	60	< 20	325	0.30	3.22
N112571	208	226	20	100	60	< 10	< 5	< 5	0.01	< 20	< 20	20	< 20	1130	0.79	3.28
N112572	208	226	20	100	35	< 10	< 5	< 5	0.01	< 20	< 20	20	< 20	1000	0.54	3.21
N112573	208	226	25	< 100	45	< 10	< 5	< 5	0.01	< 20	< 20	40	< 20	370	0.63	3.28
N112574	208	226	25	< 100	45	< 10	< 5	5	0.01	< 20	< 20	60	< 20	605	0.72	3.26
N112575	208	226	15	< 100	30	< 10	< 5	< 5	< 0.01	< 20	< 20	40	< 20	4470	0.75	3.01
N112576	208	226	25	100	70	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	560	1.61	3.51
N112577	208	226	20	100	45	< 10	< 5	< 5	< 0.01	< 20	< 20	40	< 20	910	1.21	3.33
N112578	208	226	20	100	60	< 10	< 5	< 5	< 0.01	< 20	< 20	20	< 20	1200	2.13	3.44
N112579	208	226	30	< 100	100	< 10	< 5	< 5	< 0.01	< 20	< 20	< 20	< 20	735	0.98	3.65
N112580	208	226	25	< 100	50	< 10	5	< 5	0.01	< 20	< 20	60	< 20	605	0.97	3.37
N112581	208	226	25	100	40	< 10	5	< 5	0.01	< 20	< 20	80	< 20	725	1.09	3.30
N112582	208	226	25	300	25	10	5	< 5	0.01	< 20	< 20	60	< 20	2940	2.65	3.26
N112583	208	226	40	100	< 5	10	20	5	0.09	20	< 20	180	< 20	190	0.07	3.11
N112584	208	226	35	< 100	< 5	< 10	15	5	0.04	< 20	< 20	120	< 20	205	0.06	3.15
N112585	208	226	30	< 100	< 5	< 10	15	30	0.08	< 20	< 20	100	< 20	145	< 0.01	3.15
N112586	208	226	40	< 100	< 5	< 10	20	5	0.13	< 20	< 20	160	< 20	305	0.03	3.32
N112587	208	226	40	100	5	10	20	20	0.14	< 20	< 20	160	< 20	1340	0.04	3.40
N112588	208	226	30	100	20	< 10	15	5	0.08	< 20	< 20	100	< 20	2620	0.40	3.23
N112589	208	226	20	< 100	10	10	5	< 5	0.05	< 20	< 20	20	< 20	2250	0.15	3.08
N112590	208	226	25	< 100	20	< 10	10	< 5	0.06	< 20	< 20	60	< 20	1225	0.11	3.00

CERTIFICATION: Ian Bridden

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Analytical Chemists * Geochemists * Registered Assayers

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

To: EXPATRIATE RESOURCES LTD.
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

Project : ICE-ID97-01
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Account :MPO

CERTIFICATE OF ANALYSIS A9724670

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	Mg %	Mn ppm	Mo ppm	Na %
N112591	208	226	25	1	1.84	< 10	< 20	< 5	< 10	0.15	5	80	100	825	13.70	< 10	< 0.01	1.59	120	5	0.03
N112592	208	226	10	< 1	2.21	< 10	< 20	< 5	< 10	0.07	< 5	80	80	935	14.45	< 10	0.01	1.91	120	5	0.03
N112593	208	226	< 5	< 1	2.08	< 10	< 20	< 5	< 10	0.07	< 5	85	90	715	19.10	< 10	< 0.01	1.76	120	< 5	0.03
N112594	208	226	140	1	1.83	20	< 20	< 5	< 10	0.22	5	140	70	1480	19.25	< 10	< 0.01	1.55	120	20	0.03
N112595	208	226	30	< 1	2.41	< 10	20	< 5	< 10	0.10	< 5	80	80	675	20.0	< 10	< 0.01	2.21	140	< 5	0.03
N112596	208	226	25	1	2.10	< 10	300	< 5	< 10	0.44	5	85	80	3160	13.90	< 10	0.01	1.90	200	< 5	0.03
N112597	208	226	-----	< 1	4.30	< 10	20	< 5	< 10	2.27	< 5	45	130	235	9.04	< 10	0.01	4.60	1080	< 5	0.04
N112598	208	226	-----	< 1	3.76	< 10	20	< 5	< 10	2.07	5	35	120	255	8.13	< 10	0.01	3.90	1020	< 5	0.04
N112599	208	226	-----	< 1	3.70	< 10	60	< 5	< 10	1.84	< 5	40	90	175	7.54	< 10	< 0.01	3.89	990	< 5	0.04

CERTIFICATION: David Beadle

Chemex Labs Ltd.

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

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1016 - 510 W. HASTINGS ST.
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CERTIFICATE OF ANALYSIS A9724670

SAMPLE	PREP CODE		Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Cu %	Spec Gr S.G.
N112591	208	226	20	< 100	20	< 10	5	< 5	0.03	< 20	< 20	60	< 20	3320	0.08	3.03
N112592	208	226	20	< 100	15	< 10	5	< 5	0.03	< 20	< 20	60	< 20	1310	0.09	3.03
N112593	208	226	25	< 100	20	10	5	< 5	0.04	< 20	< 20	60	< 20	290	0.07	3.16
N112594	208	226	20	< 100	70	< 10	5	5	0.02	< 20	< 20	60	< 20	6830	0.14	3.13
N112595	208	226	25	< 100	30	10	10	5	0.02	< 20	< 20	100	< 20	1215	0.07	3.07
N112596	208	226	20	< 100	15	< 10	5	5	0.03	< 20	< 20	80	< 20	2050	0.31	2.94
N112597	208	226	50	300	< 5	< 10	15	20	0.43	< 20	< 20	220	< 20	575	-----	2.82
N112598	208	226	50	400	< 5	< 10	10	15	0.51	< 20	< 20	200	< 20	850	-----	2.87
N112599	208	226	45	400	10	< 10	15	15	0.45	< 20	< 20	180	< 20	275	-----	2.86

CERTIFICATION: Ian Ritter

Chemex Labs Ltd.

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

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1016 - 510 W. HASTINGS ST.
VANCOUVER, BC
V6B 1L8

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SAMPLE	PREP CODE		Au g/t	Pt g/t	Pd g/t	Rh g/t	Se ppm	Sn ppm	In ppm
N111863	244	287	0.45	< 0.21	< 0.21	< 0.09	18.0	10	< 10
N111864	244	287	0.63	< 0.21	< 0.21	< 0.09	10.0	10	< 10
N111873	244	287	0.63	< 0.21	< 0.21	< 0.09	22.0	15	< 10

CERTIFICATION: Bart Bichler

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

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

Project : ICE CHIPS
Comments:

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* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9745972

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
N112723	205	294	1.6	1.91	26	290	< 0.5	< 2	0.39	1.5	29	176	4640	14.95	10	< 1	0.08	< 10	0.63	250	7
N112724	205	294	2.8	1.27	40	310	< 0.5	4	0.23	< 0.5	23	145	3140	>15.00	10	< 1	0.10	< 10	0.41	165	32
N112725	205	294	7.2	1.06	34	310	< 0.5	< 2	0.38	0.5	17	133	1950	12.15	10	1	0.07	< 10	0.39	210	36
N112726	205	294	2.6	3.45	6	180	< 0.5	< 2	1.59	2.0	29	145	1440	8.00	10	< 1	0.08	< 10	1.65	515	4
N112727	205	294	2.6	1.88	18	240	< 0.5	6	0.26	< 0.5	27	137	2460	12.70	10	< 1	0.15	< 10	0.63	180	16
N112728	205	294	0.4	4.87	10	230	< 0.5	< 2	0.31	0.5	46	190	4120	13.40	10	< 1	0.05	< 10	2.05	435	< 1
N112729	205	294	< 0.2	4.66	< 2	130	< 0.5	< 2	1.48	1.0	44	93	1975	9.43	10	< 1	0.07	< 10	2.83	1060	< 1
N112730	205	294	< 0.2	3.91	10	160	< 0.5	< 2	0.40	0.5	44	109	3320	14.00	10	< 1	0.04	< 10	1.84	365	< 1
N112731	205	294	0.2	4.16	6	250	< 0.5	< 2	0.47	< 0.5	40	135	2790	12.55	10	< 1	0.04	< 10	2.18	360	< 1
N112732	205	294	0.2	4.10	6	340	< 0.5	< 2	0.43	< 0.5	42	119	4260	13.95	10	< 1	0.06	< 10	1.97	375	< 1
N112733	205	294	< 0.2	4.72	< 2	320	< 0.5	< 2	0.93	1.5	66	129	2510	9.22	10	< 1	0.05	< 10	3.24	575	< 1
N112734	205	294	< 0.2	4.74	4	330	< 0.5	< 2	1.45	1.5	54	113	2260	9.26	10	< 1	0.04	< 10	3.10	590	< 1
N112735	205	294	< 0.2	3.96	4	150	< 0.5	< 2	2.02	0.5	44	92	852	6.45	10	< 1	0.01	< 10	2.96	625	< 1
N112736	205	294	< 0.2	4.97	< 2	220	< 0.5	< 2	1.22	1.5	25	126	2460	7.18	10	< 1	0.06	< 10	2.39	520	< 1
N112737	205	294	< 0.2	4.48	< 2	190	< 0.5	< 2	1.23	2.0	28	115	2120	7.15	10	< 1	0.04	< 10	2.48	520	< 1
N112738	205	294	< 0.2	4.55	< 2	170	< 0.5	< 2	1.37	2.5	23	149	4250	7.13	10	< 1	0.04	< 10	2.96	485	< 1
N112739	205	294	< 0.2	4.18	2	770	< 0.5	Intf*	1.37	4.5	19	132	>10000	7.38	10	< 1	0.04	< 10	2.84	545	< 1
N112740	205	294	< 0.2	3.69	2	300	< 0.5	Intf*	1.43	4.5	29	94	>10000	7.19	10	< 1	0.05	< 10	2.17	470	< 1
N112741	205	294	< 0.2	3.39	2	120	< 0.5	< 2	2.41	6.0	32	69	9170	5.92	10	< 1	0.05	< 10	1.88	580	< 1
N112742	205	294	< 0.2	3.63	< 2	130	< 0.5	Intf*	1.44	8.0	66	94	>10000	8.00	10	< 1	0.07	< 10	1.84	525	< 1
N112743	205	294	< 0.2	3.59	< 2	480	< 0.5	< 2	2.41	0.5	59	56	867	6.87	10	< 1	0.04	< 10	2.21	1185	< 1
N112744	205	294	< 0.2	4.93	< 2	260	< 0.5	< 2	0.92	2.0	55	131	2160	9.82	10	< 1	0.03	< 10	3.07	590	< 1
N112745	205	294	< 0.2	5.25	< 2	350	< 0.5	< 2	0.32	< 0.5	34	142	2430	10.05	10	< 1	0.05	< 10	3.11	390	< 1
N112746	205	294	3.4	4.64	2	240	< 0.5	< 2	0.47	< 0.5	21	103	1865	10.20	10	< 1	0.03	< 10	2.74	420	1
N112747	205	294	< 0.2	4.75	4	230	< 0.5	< 2	0.34	< 0.5	26	103	1775	9.86	10	< 1	0.04	< 10	3.01	235	< 1
N112748	205	294	0.2	1.00	14	230	< 0.5	< 2	0.11	< 0.5	15	153	1635	>15.00	10	1	0.03	< 10	0.30	40	6
N112749	205	294	1.0	0.95	18	160	< 0.5	< 2	0.11	< 0.5	9	90	1160	9.51	< 10	< 1	0.03	< 10	0.42	85	21
N112750	205	294	< 0.2	3.15	< 2	200	< 0.5	< 2	2.22	4.0	44	61	1425	6.37	10	< 1	0.01	< 10	2.15	860	< 1

CERTIFICATION: Stewart Bichlmaier

*INTERFERENCE: Cu on Bi and P

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 : ICE CHIPS
Comments:

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Invoice No. : I9745972
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Account : MPO

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CERTIFICATE OF ANALYSIS A9745972

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
N112723	205	294	0.05	24	560	16	2	13	20	0.08	< 10	< 10	186	< 10	472
N112724	205	294	0.09	14	460	56	< 2	8	45	0.05	< 10	< 10	128	< 10	318
N112725	205	294	0.05	14	370	28	< 2	7	22	0.10	< 10	< 10	123	< 10	154
N112726	205	294	0.04	42	270	14	< 2	15	20	0.18	< 10	< 10	128	< 10	246
N112727	205	294	0.19	17	270	50	2	8	73	0.07	< 10	< 10	118	< 10	270
N112728	205	294	< 0.01	50	370	4	4	18	18	0.03	< 10	< 10	177	< 10	426
N112729	205	294	< 0.01	40	330	2	< 2	19	17	0.28	< 10	< 10	182	< 10	564
N112730	205	294	< 0.01	25	220	2	< 2	21	10	0.13	< 10	< 10	170	< 10	392
N112731	205	294	< 0.01	28	190	2	2	22	11	0.12	< 10	< 10	188	< 10	388
N112732	205	294	< 0.01	28	250	8	4	21	10	0.12	< 10	< 10	179	< 10	560
N112733	205	294	< 0.01	45	320	< 2	2	29	22	0.20	< 10	< 10	184	< 10	560
N112734	205	294	< 0.01	40	290	2	2	26	16	0.26	< 10	< 10	193	< 10	458
N112735	205	294	0.01	44	320	< 2	2	24	30	0.32	< 10	< 10	137	< 10	226
N112736	205	294	0.01	30	250	2	4	43	15	0.16	< 10	< 10	186	< 10	334
N112737	205	294	0.01	34	270	6	2	33	16	0.17	< 10	< 10	162	< 10	288
N112738	205	294	0.01	39	270	2	< 2	26	15	0.20	< 10	< 10	182	< 10	246
N112739	205	294	< 0.01	34	Intf*	6	2	24	16	0.21	< 10	< 10	184	< 10	410
N112740	205	294	< 0.01	36	Intf*	2	< 2	24	20	0.24	< 10	< 10	154	< 10	230
N112741	205	294	0.01	34	320	< 2	< 2	16	11	0.32	< 10	< 10	157	< 10	214
N112742	205	294	0.01	44	Intf*	< 2	< 2	25	11	0.12	< 10	< 10	180	< 10	992
N112743	205	294	< 0.01	35	450	< 2	< 2	18	26	0.42	< 10	< 10	200	< 10	382
N112744	205	294	< 0.01	40	270	6	2	27	16	0.16	< 10	< 10	186	< 10	544
N112745	205	294	< 0.01	34	300	2	< 2	21	13	0.01	< 10	< 10	191	< 10	666
N112746	205	294	< 0.01	29	270	2	2	18	21	0.01	< 10	< 10	195	< 10	764
N112747	205	294	< 0.01	25	220	2	< 2	21	12	0.03	< 10	< 10	184	< 10	518
N112748	205	294	< 0.01	5	130	12	< 2	7	6	0.01	< 10	< 10	198	< 10	178
N112749	205	294	< 0.01	6	200	20	< 2	6	6	0.02	< 10	< 10	108	< 10	214
N112750	205	294	0.01	33	340	2	2	18	29	0.40	< 10	< 10	198	< 10	694

CERTIFICATION: Jan Bucklan

* INTERFERENCE: Cu on Bi and P

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 : ICE CHIPS
Comments:

Page Number : 1-A
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : I9745973
P.O. Number :
Account : MPO

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9745973

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
N112721	205	294	< 0.2	0.75	2	120	< 0.5	< 2	4.39	< 0.5	20	25	67	5.98	< 10	< 1	0.07	< 10	1.71	1595	< 1
N114144	205	294	< 0.2	3.64	< 2	80	< 0.5	< 2	2.21	5.5	35	77	2240	7.46	10	< 1	0.01	< 10	2.49	750	< 1
N114145	205	294	< 0.2	3.52	< 2	70	< 0.5	< 2	2.06	3.5	28	62	1275	6.35	10	< 1	0.01	< 10	2.50	790	< 1
N114146	205	294	1.0	3.51	< 2	180	< 0.5	< 2	0.73	2.5	29	108	3420	12.75	10	< 1	0.01	< 10	1.81	395	1
N114147	205	294	2.0	1.84	40	360	< 0.5	< 2	0.44	2.0	28	189	4160	>15.00	20	< 1	0.12	< 10	0.51	195	25
N114148	205	294	< 0.2	3.78	8	190	< 0.5	Intf*	0.68	3.5	35	164	>10000	9.42	10	< 1	0.06	< 10	1.50	520	< 1
N114149	205	294	< 0.2	3.71	6	250	< 0.5	Intf*	0.87	6.0	58	149	>10000	8.64	10	< 1	0.03	< 10	1.89	720	< 1
N114150	205	294	19.6	0.24	30	510	< 0.5	16	0.05	< 0.5	5	112	1435	11.25	10	< 1	0.01	< 10	0.03	75	10
N114501	205	294	< 0.2	4.98	< 2	100	< 0.5	< 2	2.64	4.5	38	199	1430	6.07	10	< 1	0.04	< 10	2.66	730	< 1
N114502	205	294	3.4	1.88	2	240	< 0.5	< 2	0.97	1.5	28	162	1285	8.54	10	< 1	0.23	< 10	0.64	230	5
N114503	205	294	1.6	2.99	2	480	< 0.5	< 2	0.47	< 0.5	11	267	2160	12.20	20	< 1	0.06	< 10	1.18	125	1
N114504	205	294	0.4	2.88	2	510	< 0.5	< 2	0.40	< 0.5	8	248	1760	14.35	10	< 1	0.11	< 10	0.99	80	1
N114505	205	294	1.8	2.83	10	540	< 0.5	< 2	0.34	< 0.5	15	208	2780	>15.00	10	< 1	0.08	< 10	0.90	90	2
N114506	205	294	14.2	1.57	6	150	< 0.5	< 2	0.93	0.5	21	46	824	6.21	< 10	< 1	0.03	< 10	1.09	470	4
N114507	205	294	< 0.2	2.95	< 2	370	< 0.5	< 2	1.88	0.5	38	27	541	6.85	10	< 1	0.04	< 10	1.90	1030	< 1
N114508	205	294	< 0.2	3.49	< 2	130	< 0.5	< 2	1.93	2.0	56	43	890	6.97	10	< 1	0.02	< 10	2.14	900	< 1
N114509	205	294	< 0.2	3.19	4	150	< 0.5	< 2	2.18	0.5	42	27	317	5.95	10	< 1	0.01	< 10	1.91	815	< 1

CERTIFICATION: Hart Bichler

* FOR SAMPLE N114502 ON ALL PARAMETERS.

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

Project : ICE CHIPS
Comments:

Page Number : 1-B
Total Pages : 1
Certificate Date: 14-OCT-97
Invoice No. : I9745973
P.O. Number :
Account : MPO

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9745973

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
N112721	205	294	< 0.01	15	280	4	< 2	18	79	< 0.01	< 10	< 10	151	< 10	74
N114144	205	294	0.01	38	320	4	< 2	17	19	0.40	< 10	< 10	176	< 10	508
N114145	205	294	0.01	31	270	< 2	< 2	16	15	0.37	< 10	< 10	160	< 10	312
N114146	205	294	< 0.01	23	310	16	2	18	19	0.16	< 10	< 10	203	< 10	588
N114147	205	294	0.09	18	570	56	< 2	11	30	0.10	< 10	< 10	187	< 10	548
N114148	205	294	0.01	41	Intf*	22	2	24	19	0.10	< 10	< 10	155	< 10	716
N114149	205	294	< 0.01	49	Intf*	6	< 2	24	11	0.11	< 10	< 10	131	< 10	918
N114150	205	294	< 0.01	1	410	212	< 2	3	34	0.04	< 10	< 10	197	< 10	86
N114501	205	294	0.03	57	180	< 2	2	21	23	0.23	< 10	< 10	126	< 10	278
N114502	205	294	0.09	18	210	16	< 2	12	9	0.12	< 10	< 10	131	< 10	354
N114503	205	294	0.03	26	160	18	< 2	14	25	0.11	< 10	< 10	187	< 10	198
N114504	205	294	0.01	14	90	6	2	11	14	0.09	< 10	< 10	152	< 10	146
N114505	205	294	< 0.01	14	140	10	2	12	11	0.08	< 10	< 10	172	< 10	272
N114506	205	294	< 0.01	14	330	30	< 2	9	22	0.32	< 10	< 10	150	< 10	288
N114507	205	294	< 0.01	27	550	< 2	< 2	12	25	0.49	< 10	< 10	196	< 10	374
N114508	205	294	< 0.01	37	480	< 2	< 2	18	16	0.42	< 10	< 10	181	< 10	716
N114509	205	294	< 0.01	31	440	< 2	< 2	14	16	0.46	< 10	< 10	185	< 10	478

CERTIFICATION: Ian Bichler

* FOR SAMPLE N114502 ON ALL PARAMETERS.

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

EXPATRIATE RESOURCES LTD.
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P.O. BOX 4127
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Y1A 3S9

Project : ICEROADCUTCHIPSAMPLE
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Page [illegible] r : 1-A
Total P[illegible] : 1
Certificate Date: 06-AUG-97
Invoice No. : I9734556
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9734556

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
IT97-45	208	276	< 0.2	4.25	8	50	< 0.5	< 2	1.90	4.0	30	155	1695	7.13	10	< 1	0.01	< 10	2.40	660	< 1
IT97-55	208	276	< 0.2	3.88	8	90	< 0.5	< 2	2.16	3.0	31	140	1015	6.97	10	< 1	0.01	< 10	2.33	615	< 1
IT97-65	208	276	< 0.2	4.67	4	150	< 0.5	< 2	2.27	3.0	32	164	913	7.27	10	< 1	< 0.01	< 10	2.93	685	< 1
IT97-75	208	276	0.8	4.53	20	210	< 0.5	< 2	0.95	4.0	25	177	2270	11.75	10	< 1	0.10	< 10	2.29	445	< 1
IT97-85	208	276	0.6	5.91	16	170	< 0.5	< 2	1.21	4.5	35	189	2320	12.55	10	< 1	< 0.01	< 10	3.06	665	< 1

CERTIFICATION: Hart Bichler

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

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Project : ICEROADCUTCHIPSAMPLE
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Page : 1-B
Total Pages : 1
Certificate Date: 06-AUG-97
Invoice No. : I9734556
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9734556

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	Cu %
IT97-45	208	276	0.01	57	180	< 2	2	15	14	0.23	< 10	< 10	118	< 10	472	0.20
IT97-55	208	276	0.01	48	250	< 2	< 2	11	14	0.23	< 10	< 10	113	< 10	696	0.11
IT97-65	208	276	0.01	53	250	< 2	4	14	10	0.24	< 10	< 10	119	< 10	804	0.10
IT97-75	208	276	< 0.01	42	220	< 2	4	14	12	0.16	< 10	< 10	118	< 10	1370	0.24
IT97-85	208	276	< 0.01	54	290	< 2	4	15	28	0.18	< 10	< 10	138	< 10	1610	0.25

CERTIFICATION: Hart Bichler

APPENDIX VII

REPORTS FROM VANCOUVER PETROGRAPHICS LTD.

Vancouver Petrographics Ltd.

8080 GLOVER ROAD, LANGLEY, B.C. V1M 3S3
PHONE (604) 888-1323 • FAX (604) 888-3642
email: vanpetro@vancouver.net

Invoice 970415
June 28, 1997

Report For Mr. Tom Becker, Project Geologist
Expatriate Resources Ltd.
Archer, Cathro & Associates (1981) Limited
Box 4127
Whitehorse, Yukon
Y1A 3S9
Tel: 403-668-4825
Fax: 403-633-6060

Samples: ID97-03:107.36m IC96-29:38.20m ID97-04:64.62m
IC96-05:60.75m (4 P.T.S.)
ICE Property, Finlayson Project

Note: Detailed field relationships descriptions were not included with the sample submission and Vancouver Petrographics Ltd. personnel were not involved in sample collection.

Summary: These specimens are all altered basalts from the ICE Property in Yukon Territory. Exploration is for Cyprus-type volcanogenic massive sulfide deposits. The first three samples consist of the same porphyritic basalt unit in various stages of alteration.

The samples can be summarized as follows:

1) ID97-03:107.36m - Very chloritized porphyritic basaltic tuff (agglomeratic to lapilli tuff)
2) IC96-29:38.20m - Highly fractured, moderately chloritized and saussuritized porphyritic basalt
3) ID97-04:64.62m - Chloritized and saussuritized porphyritic basalt
4) IC96-05:60.75m - Sheared, intensely carbonatized and weakly sericitized basalt. (weakly sericitized, saussuritized and silicified)

Sample ID97-03:107.36m exhibits definite divitrification textures such as relict perilitic cracks and microlites. This specimen also is tuffaceous as suggested by the presence of lithic fragments and broken phenocrysts. The following two specimens IC96-29:38.20m and ID97-04:64.62m have similar primary porphyritic textures. All three have late stage minor hornblende development.

The plagioclase phenocrysts are altered by a distinctive distribution of chlorite along the albite twin lamellae. Sericite is prominent in sample ID97-04:64.62m. Minor late stage orthoclase in narrow hairline veinlets was also noted in this sample. Phenocrysts are much less altered in ID97-29:38.20m where the plagioclase composition was An_{45}.

Sample IC96-05:60.75m is intensely carbonatized. The rock is mainly composed of multi-stage calcite. Primary textures have largely been obliterated by the alteration. Sample IC96-05:60.75m is the only sample with any appreciable secondary quartz.

If you have any questions regarding the attached petrographic descriptions or would like other specific lines of inquiry addressed, please call me at 970-6402.

Yours truly,

J.T. (Jo) Shearer, M.Sc., P.Geo.

-- PETROGRAPHIC DESCRIPTION --

FOR: ICE Property, Finlayson Project, ATTN.: Tom Becker

SPECIMEN NUMBER: ID97-03:107.36m

HANDSPECIMEN DESCRIPTION:

Diamond drillcore, Fine grained, Medium green with dark green intensely chloritized plagioclase phenocrysts, Dark fine grained band on one side of specimen at about 20° to core axis, Generally chloritic, Banding could indicate coarse fragmental texture, Minor fractures at 30° to core axis, Minor fine grained potassium feldspar content, Non foliated, Non magnetic.

FIELDROCK NAME: Very chloritized porphyritic basalt
(possibly agglomeratic to lapilli tuff)

THINSECTION EXAMINATION:

ESTIMATED MODE:

34% Chlorite
12% Plagioclase phenocrysts (relict)(chlorite-saussurite-muscovite)
33% Groundmass (saussuritic plagioclase, fine grained quartz)
2% Orthoclase
5% Chlorite spheriulites
13% Sericite (muscovite)
1% Hornblende

The plagioclase phenocrysts often form groups of crystals up to >3mm in length. Individual crystals seldom exceed 2.5mm. Plagioclase phenocrysts are mainly altered by a relatively fine grained assemblage of chlorite, muscovite and calcite. The chlorite tends to form subrectangular areas within the individual crystal outlines. The borders of these chlorite rectangles are thin lines of saussurite. Saussurite also forms lenses subparallel to albite twinning (relict) up to 0.4mm in length within the plagioclase phenocryst outlines. Saussurite is a fine grained assemblage of zoisite, calcite, sericite and albite formed by the hydrothermal alteration of calcic plagioclase Other phenocrysts are mainly altered by sericite with an irregular pattern of chlorite at 120° to the sericite "lineation".

Chlorite forms spherical structures (spheriulites) up to 0.6mm in diameter and also filling narrow veinlets.

Sericite forms discontinuous veinlets up to 0.2mm wide.

The groundmass consists largely of saussuritized plagioclase. Plagioclase also forms sparsely disseminated small needle-like crystals (up to 0.1mm) randomly throughout. Groundmass in some parts of the slide has preserved relict rough glassy cracks (perlitic texture). Some of the larger plagioclase phenocrysts are rounded and may perhaps be broken suggesting a tuffaceous origin.

There are small amounts of relatively euhedral secondary hornblende developed within the altered plagioclase phenocrysts. Secondary hornblende was noted filling some of the spheriulites apparently replacing chlorite (late stage hornblende development).
Groundmass is characterized by a 0.05mm fine grained spheroidal pattern early sericite, midstage chlorite and minor late stage hornblende.
The specimen also contains straight sided, indistinct lithic fragments up to 1.2mm across.
Rare subrectangular grains up to 0.8mm across are now composed of fine grained hornblende which could reflect replacement of primary mafic mineral.
Several generations of chlorite were noted as follows:

a) groundmass: chlorite brown birefringence
b) phenocrysts: chlorite with sericite and veinlet selvages
c) spheriulite filling: chlorite purplish-blue birefringence in rosettes

Traces mostly of chalcopyrite and lesser pyrite in spheriulite-amygules associated with chlorite brown birefringence "sheet" chlorite. Chalcopyrite averages 0.005mm, pyrite grains are up to 0.03mm.

ROCK NAME: Sericitized, Chloritized and Saussuritized Porphyritic Basaltic Tuff
(divitrified, lapilli tuff-agglomerate, spheriulitic to amygdaloidal)

-- PETROGRAPHIC DESCRIPTION --

FOR: ICE Property, Finlayson Project, ATTN.: Tom Becker

SPECIMEN NUMBER: IC96-29:38.20m

HANDSPECIMEN DESCRIPTION:

Diamond drillcore, Light green possibly saussuritized plagioclase phenocrysts in a light grey matrix, Thick, Dark green chlorite on fracture surfaced, Highly fractured, Chlorite also replacing primary mafic phenocrysts up to 3mm in length, Non-magnetic, Chlorite filling fractures has leached - lattice oxidized appearance, Traces of potassium feldspar, Minor carbonate content.

FIELDROCK NAME: Chloritized and saussuritized porphyritic basalt
(highly fractured)

THINSECTION EXAMINATION:

ESTIMATED MODE:

22% Plagioclase phenocrysts (relict)
16% Plagioclase (fine needle-like crystals)
(Saussurite mainly in groundmass)
15% Chlorite
10% Sericite
32% Groundmass (fine grained plagioclase, quartz and saussurite)
5% Calcite
Trace Orthoclase
4% Hornblende
<1% Pyrite

The plagioclase phenocrysts in this specimen are far less altered than sample ID97-03:107.36. In this specimen the plagioclase phenocrysts are euhedral to subeuhedral and average about 1mm in length but are often clustered into groups >3mm in diameter. Alteration takes the form of minor to moderate chlorite development mainly along the albite twin lines giving a linear distribution to the 0.1mm discontinuous lenses of chlorite. Plagioclase composition is approximately An_{45} (Andesine).
Plagioclase also occurs as a network of needle-like crystals averaging 0.2mm in length with the interstitial groundmass.
Chlorite occurs in irregular and discontinuous veinlets up to 0.2mm wide cross cutting groundmass and phenocrysts. Chlorite associated with fine grained and sparry calcite form veinlets up to 4.5mm wide. Several generations of chlorite were noted in the veinlets from fibrous varieties at the veinlet margins to rosette textured "open-space" filling. Fine grained calcite averages about 0.05mm as individual grains combining into skeletal aggregates up to 2.0mm wide. Interstitial sparry calcite lenses are up to 0.6mm in length. Traces of orthoclase are associated with the largest fine grained calcite lenses. Minor sericite lenses were noted in the calcite-chlorite veinlets.
Hornblende forms rounded, clear grains up to 0.3mm across and as fine grained indistinct masses replacing groundmass. Minor spheriulites occur up to 0.2mm in diameter, but average 0.1mm, mainly filled with chlorite.

Pyrite forms subeuhedral cubes up to 0.03mm across closely associated with chlorite filled spheriulites. Very fine grained pyrite (up to 0.006mm) is disseminated throughout the chlorite-calcite veinlets and throughout the groundmass.

ROCK NAME: (Slightly carbonatized & sericitized) Moderately chloritized and saussuritized porphyritic basalt

-- PETROGRAPHIC DESCRIPTION --

FOR: ICE Property, Finlayson Project, ATTN.: Tom Becker

SPECIMEN NUMBER: ID97-04:64.62m

HANDSPECIMEN DESCRIPTION:

Diamond drillcore, Medium to dark grey green, Lighter green-grey altered plagioclase phenocrysts up to 4mm in length, Abundant patchy chlorite throughout, abundant chlorite along fractures, Minor potassium feldspar along late stage hairline veinlets less than 0.1mm wide, Moderately strongly magnetic, Traces of spherical structures up to 0.5mm in diameter now filled with chlorite, Irregular calcite veinlets up to 1mm wide cutting all other minerals.

FIELDROCK NAME: Chloritized, carbonatized and saussuritized porphyritic basalt

THINSECTION EXAMINATION:

ESTIMATED MODE:

12% Plagioclase (large phenocrysts)
20% Plagioclase (needle-like crystals)
18% Chlorite
15% Saussurite
% Groundmass (mainly
<1% Orthoclase
4% Calcite
<1% Hornblende
5% Magnetite

Plagioclase forms crystal clusters >3mm in diameter (glomeroporphyritic). Plagioclase is mainly altered by linear, elongate lenses of saussurite and green chlorite distributed along the albite twin lines. In places, plagioclase is intensely altered by saussurite Rarely plagioclase phenocrysts are replaced by chlorite associated with fine grained magnetite.

Plagioclase also forms smaller needle-like crystals up to 0.4mm in length which form a lattice filled by fine grained saussuritized groundmass.

Spheriulites are up to 0.5mm in diameter and are filled with quartz and occasionally chlorite and quartz.

Hornblende forms subeuhedral crystals up to 0.08mm in length replacing groundmass.

Magnetite forms irregular, ragged grains up to 0.02mm across associated with chlorite disseminated throughout the specimen. Magnetite is also associated with other minor non-reflecting opaque material perhaps carbonaceous material. Magnetite does not occur within the altered phenocrysts or calcite veining.

Sparry calcite fills veinlets up to 0.6mm wide which cross cut all other mineral species.

ROCK NAME: Chloritized and saussuritized porphyritic basalt

-- PETROGRAPHIC DESCRIPTION --

FOR: ICE Property, Finlayson Project, ATTN.: Tom Becker

SPECIMEN NUMBER: IC96-05:60.75m

HANDSPECIMEN DESCRIPTION:
Diamond drillcore, Medium to light green colour, Brecciated and sheared texture, Irregular rounded fragments up to 7mm in diameter, highly altered by calcite as pervasive development and dark irregular veinlets, Minor disseminated (about 1%) pyrite, Non-magnetic, No potassium feldspar content.

FIELDROCK NAME: Very carbonatized sheared basalt

THINSECTION EXAMINATION:

ESTIMATED MODE:
15% Calcite (in veinlets)
35% Calcite (fine grained pervasive)
2% Pyrite
Trace Chalcopyrite
Trace Magnetite
8% Chlorite
16% Sericite
20% Groundmass (now mainly saussurite, calcite and quartz)
4% Quartz (veining)

Plagioclase ghosts are intensely sericitized. Fibrous chlorite commonly forms an irregular "flow" pattern.
Calcite forms sparry veinlets up to 0.6mm wide which are relatively discontinuous. These sparry calcite veinlets are cross-cut by chlorite-calcite veining at about 60°.
Calcite also forms a pervasive "spongy" network of rectangular grains up to 0.5mm across separated by chlorite "matrix".
Minor quartz, as small composite lenses, is associated with the sparry calcite veining.
Sericite occurs as fine grained flakes associated with chlorite in the original rock fragments.
Pyrite forms irregular to euhedral grains up to 0.45mm across disseminated throughout the sheared areas; mainly associated with fine grained calcite veinlets and quartz lenses. The largest pyrite grains are often surrounded by a thin (0.2mm) rim of sutured quartz.
Traces of magnetite form rounded grains up to 0.04mm.
Rare chalcopyrite forms small grains also associated with quartz and as rare small inclusions in pyrite.

ROCK NAME: Intensely carbonatized, weakly sericitized sheared basalt
(slightly silicified)

APPENDIX VIII

CERTIFICATES OF ANALYSIS FOR WHOLE ROCK SPECIMENS

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

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

Project : ICE-WR-1
Comments:

Certificate Date: 17-JUL-97
Invoice No. : I9730927
P.O. Number :
Account : MPO

CERTIFICATE OF ANALYSIS A9730927

SAMPLE	PREP CODE		Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na2O % XRF	P2O5 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL %	Ba ppm
N114101	208	226	13.14	10.60	0.01	12.18	0.27	6.78	0.21	3.20	0.14	47.65	1.56	3.51	99.25	271
N114102	208	226	12.96	9.79	0.01	13.25	0.15	7.06	0.22	3.07	0.18	47.33	1.86	3.27	99.15	184
N114103	208	226	12.87	9.11	< 0.01	12.35	0.19	7.75	0.19	3.65	0.13	48.13	1.37	3.49	99.23	62
N114104	208	226	10.82	7.72	< 0.01	18.51	0.22	4.06	0.27	3.28	0.29	47.12	3.17	3.38	98.84	571

CERTIFICATION: Ian Bichler

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

Project : ICE-WR-1
Comments:

Certificate Date: 17-JUL-97
Invoice No. :I9730927
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9730927

SAMPLE	PREP CODE		Cs ppm	Hf ppm	La ppm	Nb ppm	Rb ppm	Sr ppm	Ta ppm	Y ppm	Zr ppm
N114101	208	226	< 1	3	5	1	6	214	< 1	34	73
N114102	208	226	< 1	3	6	2	3	182	< 1	39	87
N114103	208	226	< 1	2	3	< 1	4	74	< 1	33	57
N114104	208	226	1	6	10	4	4	134	< 1	65	168

CERTIFICATION: Stewart 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

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P.O. BOX 4127
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Y1A 3S9

Project : ICE-WHOLE ROCK
Comments:

Page :1-A
Total Pages :1
Certificate Date: 11-SEP-97
Invoice No. : I9740491
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9740491

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm
N114105	208	226	13.63	10.90	0.05	9.62	0.19	7.14	0.16	2.95	0.09	49.00	1.13	3.22	98.08	140
N114106	208	226	13.62	7.11	0.02	12.88	0.10	7.54	0.19	3.64	0.11	49.00	1.48	2.48	98.17	71
N114107	208	226	14.99	8.27	< 0.01	7.81	< 0.01	6.80	0.13	4.74	0.01	53.00	0.57	2.46	98.78	31
N114108	208	226	14.42	9.42	0.03	11.40	0.03	6.62	0.19	4.24	0.11	48.03	1.38	2.45	98.32	557

CERTIFICATION: Hart Bichler

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Analytical Chemists * Geochemists * Registered Assayers

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

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P.O. BOX 4127
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Project : ICE-WHOLE ROCK
Comments:

Page er :1-B
Total Pa s :1
Certificate Date: 11-SEP-97
Invoice No. :I9740491
P.O. Number :
Account :MPO

CERTIFICATE OF ANALYSIS A9740491

SAMPLE	PREP CODE		Cs ppm	Hf ppm	La ppm	Nb ppm	Rb ppm	Sr ppm	Ta ppm	Y ppm	Zr ppm
N114105	208	226	< 1	1	2	2	5	37	< 1	24	67
N114106	208	226	< 1	2	4	3	3	41	< 1	28	78
N114107	208	226	< 1	< 1	< 1	1	< 1	87	< 1	11	23
N114108	208	226	< 1	1	3	1	3	142	< 1	27	78

CERTIFICATION: Hart Bichler