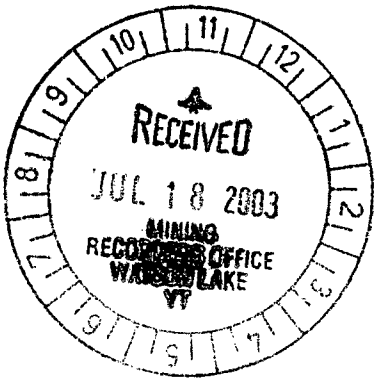

Re Evaluation

Of The

Ice Massive Sulfide Deposit

Watson Lake Mining Division

Ice:	1-402,443-454,497-506,555,556,791-802, 841-854,899-900,1042-1051,1072-1105

NTS:	105G13/ and 105G14.

	Central UTM Easting	**Central UTM Northing**
Ice Property:	374,334.74	686,2115.08

June 2nd, 2003

Prepared For:
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094335 c.2

Costs associated with this report have been approved in the amount of $ 22,263.21 for assessment credit under Certificate of Work No. QL 25651

.....

Mining Recorder
Watson Lake Mining District

This report has been examined by the Geological Evaluation Unit and is considered (d) Yukon Quartz Mining Act work and is allowed as representation work in the amount of $ 22,263.21

M.B.

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

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I. EXECUTIVE SUMMARY

The following report includes Expatriate Resources Ltd. wholly owned properties called Ice property. This property is located in the Watson Lake Mining District in the Yukon, Canada (Figure 1). Using the National Topographic System, they encompass 105G13 and 105G14.

Geologically, the Ice property is north of the boundary of the Yukon-Tanana and Slide Mountain geologic terranes (Figure 2). The northern portion of the map, where the Ice property is located, is within Yukon-Tanana terrane. The northeastern margin of the Ice property is the Finlayson Lake Fault Zone, a complex zone of steep and shallow faults related to transpressive suturing. The southwestern boundary of the Ice property is the Tintina Fault Zone, a major strike-slip fault with at least 450 kilometres of dextral displacement during Late Cretaceous and/or Early Tertiary time (Tempelman-Kluit et al., 1976).

Mineralization in these geologic terranes is primarily volcanogenic in origin, however, veins, skarns and asbestos occur. The volcanogenic occurrences are primarily Kuroko-type, although there is Besshi- and Cyprus-type deposits. The Ice deposit is an example of Cyprus-type mineralization.

A first pass phase of exploration has been completed on the Ice properties; this consisted of soil geochemistry, outcrop geologic mapping, prospecting and diamond drilling. Diamond drilling on the Ice claims resulted in the discovery of the copper-rich Ice deposit. The Ice deposit resource has been previously defined by 121 diamond drill holes.

The 2002 exploration program focused on re-assessment of the resource that was calculated by Becker (1998a) and Thompson (1998) as well as geologic aspects of the resource that was established by Eaton and Pigage in 1997. A sectional resource of 1 Million tonnes @ 4.32% Cu of sulphide material was defined over a strike length of 450 metres and down – dip extent of 220 metres. Average thickness is 4.94 metres with a thicker central core of 15 – 16 metres. Assuming a mining thickness of 3 metres, the resource would be diminished to approximately 850,000 tonnes @ 4.29% Cu.

II. LOCATION AND ACCESS

The Ice property is located in the Watson Lake Mining District in the Yukon, Canada. Using the National Topographic System, they encompass 105G13 and 105G14. The property coordinates, in Universal Transverse Mercator (UTM) and North American Datum (NAD) Zone 9 projection and coordinate system, as well as the size in square kilometres are summarized in Table 1.

	Central UTM Easting	Central UTM Northing	Total Square Kilometres
Ice	374,334.74	686,2115.08	99.40

Table 1 Ice property UTM locations.

The claim group is located 220 kilometres northeast of the major city of Whitehorse, Yukon and approximately 19 kilometres north of kilometre 279 on the Robert Campbell Highway (Figure 1). There are several ways in which to arrive at the Ice property main camp area.

Road access to the Ice property is via the Robert Campbell Highway. From there, the Mink Creek airstrip can be used as a staging area to supplies and personnel to and from the camps. With a land permit, the Mink Creek airstrip can be cleaned and graded, and subsequently used by short take-off and landing aircraft. The 1997 Mink Creek Land Use Permit was YA73X311.

Executive-style aircraft can use the government-maintained IFR airstrip at Ross River and then gain access to the property by helicopter. Additional fixed wing access is by float-equipped planes that operate from Gonzo Lake, 4 kilometres west of the Ice property camp and then gain access to the camp by helicopter.

In 1997, for an extensive drilling program at the Ice property, road access was established to the Ice property using Land Use Permit YA6F268. A Caterpillar D6 bulldozer was mobilized to the property using an access route, which extended 25 kilometres from the Robert Campbell Highway, to the Ice property camp. The bulldozer followed a pre-existing path for the first 19 kilometres. The bulldozer was utilized for moving drills, building drill sites, and constructing roads on the property. With minimal effort, this road could be re-established.

For the 2002 exploration program access to the property was gained by helicopter from the Inconnu Lodge staging area, which is owned and operated by Warren LaFave. The staging area is situated on the Robert Campbell Highway next to the Finlayson Lake campground area. The flight is approximately 20 minutes one way to the Ice property camp area.

Regional infrastructure, proximal to the Ice claims, is the cities of Ross River, Whitehorse and Watson Lake. All cities have airports, hospitals and local ground transportation systems. The closest power lines can be located at Ross River, approximately 60 kilometres to the west of the claim group (Figure 1). The electric power is sourced from hydroelectric power in Whitehorse. No serviceable railways exist in the Yukon.

III. TOPOGRAPHY AND PHYSIOGRAPHY

The Ice property is geographically situated on the Yukon Plateau and approximately 30 kilometres northeast of the Tintina Trench. The central part of the properties straddle a series of low ridges while the southern, eastern and western extremities cover broad swampy lowlands. Creeks in the western part of the properties 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 metres on the banks of the Pelly River to 1585 metres.

During Pleistocene time, a continental ice sheet covered the entire property. 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.

The vegetation is starkly contrasted by tree line, which occurs at approximately 1400 metres in elevation. 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 metres with buckbrush, slide alder, and scattered trees at higher elevations give way to grasses and lichens above 1400 metres. Vegetation transitions occur about 150 metres lower on north-facing slopes.

Climate in the Ice property area is categorized as continental. It is characterized by relatively long, cold winters with warm dry summers. Annual precipitation averages about 450 millimetres and occurs mostly as rain in summer. Snow cover rarely exceeds 60 centimetres. Permafrost is common in the area, however it is not pervasive. The local streams and water bodies usually break-up in late May and freeze over in early November. The weather conditions imply that winter drilling or ground geophysics done on snow and ice can be done at reasonable temperatures from February to April, summer drilling and ground exploration programs can be done from post break-up in late May until late October.

IV. CLAIM DETAILS

The Ice property was acquired by staking in 1996. In 1997, the Ice property was surveyed by Archer, Cathro and Associates (Becker, 1997; Becker, 1998). Claim posts were surveyed using a Trimble Geoexplorer GPS unit; field readings were corrected using base station data obtained from the Department of Renewable Resources (Forestry) in Whitehorse. This survey is not considered a legal survey. The Ice claims are listed in Table 2 and are on Plate 1.

Claim Group	Claim Number	Claim Number To	Fractions	Number of claims	Record Number From	Record Number To	Expiry Date
Ice	1	16		16	YB78632	YB78647	6-Mar-10
Ice	17	48		32	YB84405	YB84436	6-Mar-06
Ice	49	165		117	YB84880	YB84996	6-Mar-06
Ice	166		F	1	YB84997		6-Mar-06
Ice	167			1	YB84998		6-Mar-06
Ice	168		F	1	YB84999		6-Mar-06
Ice	169			1	YB85000		6-Mar-06
Ice	170		F	1	YB85001		6-Mar-06
Ice	171			1	YB85002		6-Mar-06
Ice	172		F	1	YB85003		6-Mar-06
Ice	173			1	YB85004		6-Mar-06
Ice	174		F	1	YB85005		6-Mar-06
Ice	175			1	YB85006		6-Mar-06
Ice	176		F	1	YB85007		6-Mar-06
Ice	177			1	YB85008		6-Mar-06
Ice	178		F	1	YB85009		6-Mar-06
Ice	179			1	YB85010		6-Mar-06
Ice	180		F	1	YB85011		6-Mar-06
Ice	181	212		32	YB85012	YB85043	6-Mar-06
Ice	213		F	1	YB85044		6-Mar-06
Ice	214	326		113	YB85045	YB85157	6-Mar-06
Ice	327	334		8	YB85158	YB85165	6-Mar-05
Ice	335	362		28	YB86186	YB86213	6-Mar-06
Ice	363	374		12	YB86878	YB86889	6-Mar-06
Ice	375	402		28	YB86214	YB86241	6-Mar-06
Ice	443	454		12	YB86282	YB86293	6-Mar-03
Ice	497	506		10	YB86336	YB86345	6-Mar-03
Ice	555	556		2	YB86394	YB86395	6-Mar-03
Ice	791	802		12	YB86994	YB87005	6-Mar-03
Ice	841	854		14	YB86564	YB86577	6-Mar-03
Ice	899	900		2	YB86622	YB86623	6-Mar-03
Ice	1042	1051		10	YB87133	YB87142	6-Mar-03
Ice	1072	1079		8	YB86638	YB86645	6-Mar-03
Ice	1080	1081	F	2	YB87693	YB87694	6-Mar-10
Ice	1082	1105	498	24	YB89308	YB89331	6-Mar-03

Table 2 Ice property claim information

Figure 1 Ice property location map.

V. HISTORY

Expatriate Resources Ltd. staked the Ice property in 1996. Exploration in this region dates back to 1966, when the Faro lead-zinc deposit was discovered 100 kilometres to the northwest.

A. ICE

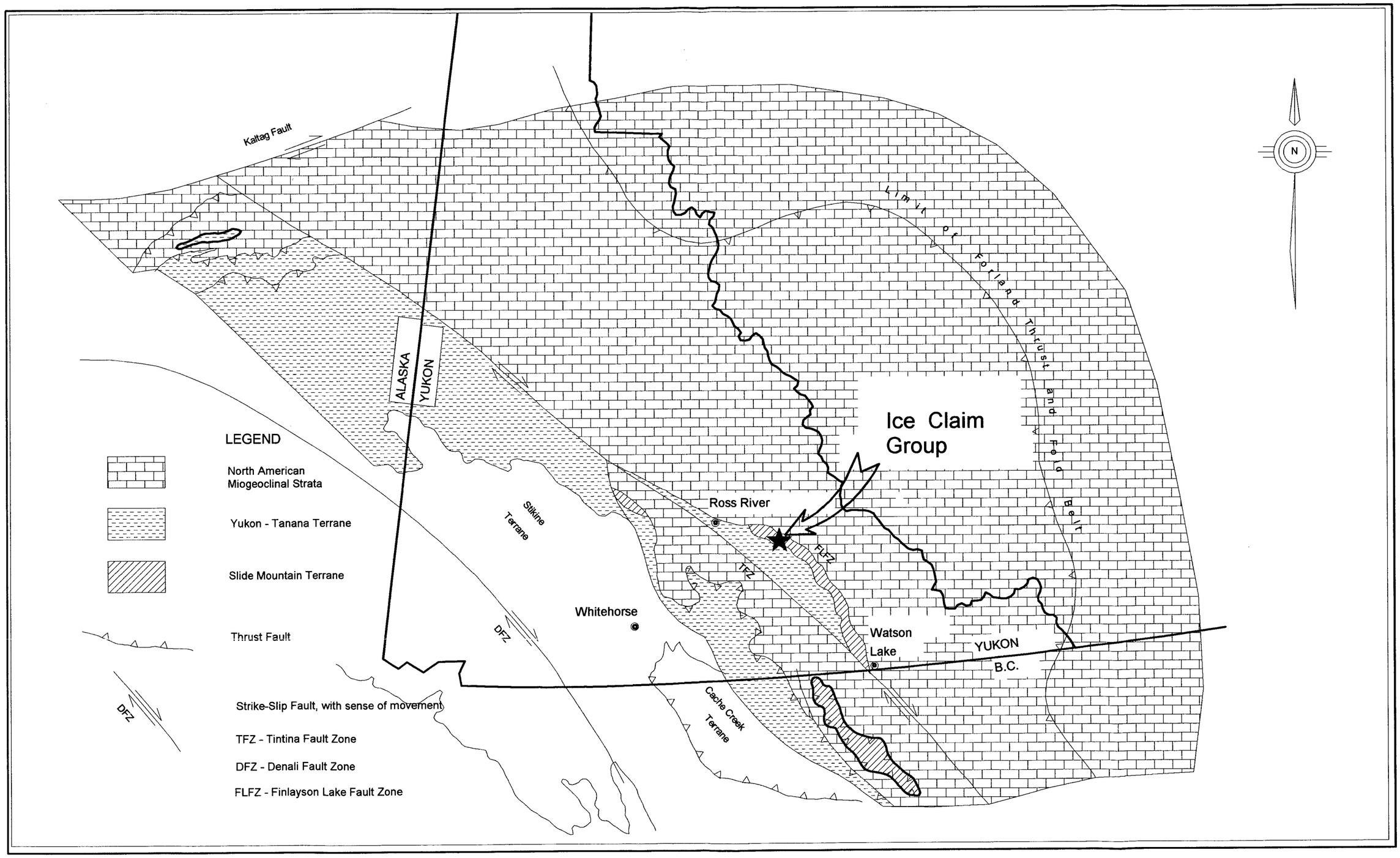
In 1996, sixteen claims were staked around the current Ice deposit area to cover a previously unstaked copper soil geochemistry anomaly. This anomaly was selected from a geochemical database, which documented 1973 exploration from a joint venture between Archer, Cathro and Associates Limited. An Expatriate Resources Ltd. geologist reported secondary copper mineralization within the copper anomaly area and subsequently, the property was increased to forty-eight claims. A drilling program commenced in 1996 and the remainder of the claims was staked later in the summer after favourable drill results were obtained.

The drill program resulted in the Ice deposit which was calculated by Becker (1998a) to have resource of 4 561 863 tonnes grading 1.48% copper with minor silver, gold, cobalt and zinc credits. This work was based on 10 584 metres of drilling in 121 diamond drill holes between 1996 and 1997. Thompson (1998) substantiated this work with an audit of the mineral resources. No production is recorded from the Ice deposit area.

In 2002, J. Klein re-evaluated the geophysical data on the Ice property from airborne geophysics conducted by Dighem (now Fugro) (Pritchard 1997). From this work, ground targets were generated (Moore and Klein, 2002). Ground exploration and ground geophysics of these targets is still incomplete.

VI. REGIONAL GEOLOGY

Tempelman-Kluit of the Geological Survey of Canada (1977; 1979) completed recent regional mapping of the Finlayson Lake area. Mortensen and Jilson (1985) and Mortensen (1992) have completed more recent geological studies. Generalized regional geology is described in the following paragraphs and shown on Figure 2.


Kaltag Fault
ALASKA
YUKON
Limit of Foreland Thrust and Fold Belt
Ice Claim Group
Ross River
Stikine Terrane
FLFZ
TFZ
Whitehorse
DFZ
Watson Lake
YUKON
B.C.
Cache Creek Terrane
N
LEGEND
North American Miogeoclinal Strata
Yukon - Tanana Terrane
Slide Mountain Terrane
Thrust Fault
DFZ
Strike-Slip Fault, with sense of movement
TFZ - Tintina Fault Zone
DFZ - Denali Fault Zone
FLFZ - Finlayson Lake Fault Zone

The Ice property is located within the Finlayson District, a 380 by 60 kilometre area comprised primarily of the Yukon-Tanana and Slide Mountain geologic terranes (Figure 2). 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 kilometres of dextral displacement during Late Cretaceous and/or Early Tertiary time (Tempelman-Kluit et al., 1976). The two terranes were not accreted to North America until Jurassic time; cobbles, from both units, are present in Late Triassic immature sediment that unconformably overlying Slide Mountain and North American stratigraphy (Tempelman-Kluit et al., 1976). Intrusive rock suites span from the Devonian to Tertiary time.

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 as well as 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 District, units belonging to the igneous suite are thrust to the northeast over the metasedimentary package and southwest 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).

A. YUKON–TANANA TERRANE

The Yukon-Tanana Terrane is comprised largely of Palaeozoic continental margin and/or arc stratigraphy deposited on a continental basement of uncertain origin (Mortensen, 1992). The Yukon-Tanana Terrane in the Finlayson District contains three major units collectively referred to as the Layered Metamorphic Sequence. The lower unit is comprised of garnet-mica schist with interbedded marble, calc-silicate and calcareous schist near the top. The middle unit is composed 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). Immediately south of Finlayson Lake, large isolated outcrops of marble and quartzite are dated as Early Pennsylvanian to Early Permian rocks (Templeman-Kluit, 1979). These form the uppermost unit of the Yukon-Tanana Terrane.

This sequence of units is generally correlative with a similar stratigraphic sequence in ancestral North America (Mortensen and Jilson, 1985). The lowermost sequence is correlated with the Lower Cambrian Atan Group and the middle carbonaceous assemblage is correlated with the offshelf, Silurian-Devonian Nasina quartzite assemblage. The felsic volcanic rocks are most similar to locally extensive Mississippian siliceous volcanic rocks in the North American stratigraphy. Local calcareous phyllite and massive greenstone near the top of the lower unit are lithologically similar to the Kechika Group and Lower Palaeozoic alkalic greenstone rocks, respectively.

Gneiss and augen gneiss invariably occur low in the Yukon-Tanana Terrane succession beneath either the lowermost calcareous unit or the middle carbonaceous unit. Mortensen and Jilson (1985) considered the gneisses to be metamorphosed Mid-Palaeozoic plutonic rocks. Conversely, Templeman-Kluit (1997) considers these gneisses to be at least in part recrystallization of earlier stratigraphy. Radiometric dating of the gneisses has consistently resulted in Late Devonian to Mississippian ages (Mortensen, 1992). The gneisses occur in structural culminations with diameters on the order of 10 kilometres and structural relief up to about 1 kilometre.

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

B. INTRUSIVE ACTIVITY

Intrusive activity within the Finlayson District 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 (Mortensen and Jilson, 1985).

C. STRUCTURE

Structurally, Yukon-Tanana Terrane schists and gneisses contain a pervasive, flat- to gentle-dipping foliation. Close examination of this fabric indicates that it commonly is a close-spaced crenulation cleavage. Large-scale folds related to this fabric can rarely be mapped in the field. In most cases bedding and earlier fabrics are transposed into near

parallelism with this dominant fabric. Later crenulation cleavages are present only locally. Some of the Cretaceous intrusions have a mild deformation fabric, others are massive and do not contain a foliation.

Thrust faults within the Finlayson District juxtapose lithologic sequences with similar deformation fabrics. Thrusting postdates the Late Palaeozoic Slide Mountain Terrane lithologies and predates the Cretaceous intrusive. Recent mapping also suggests, but does not definitively prove, the presence of major late extensional faults juxtaposing differing sequences (Templeman-Kluit, 1997). East to northeast trending, steep, normal faults disrupt all earlier deformation fabrics.

D. METAMORPHISM

Metamorphic grades range from lower greenschist facies to middle amphibolite facies. Contact hornfels around plutonic units occur locally. Metamorphism and deformation are tentatively correlated with transpressive suturing of these suspect terranes with ancestral North America. Suturing is restricted to the time interval of post-Triassic continuing into the Cretaceous. Whether deformation is continuous or sporadic has not been fully verified at present.

E. MINERALIZATION

The discovery of the Kudz Ze Kayah, GP4F, Fyre Lake, and Wolverine deposits within the Finlayson District in the last few years (Johnston and Mortensen, 1994) has re-focused exploration activities in the area. The deposits occur within metasedimentary and metavolcanic sequences of the Yukon-Tanana Terrane and are associated with felsic volcanic rocks present in the middle unit of that terrane. Grades and tonnages of these deposits are in Table 4 in section VII-A-4.

VII. REGIONAL MINERALIZATION

A. VOLCANIC MASSIVE SULFIDE DEPOSITS

Regional mineralization includes volcanic associated massive sulfide deposits (VMS). These deposits occur in terranes dominated by volcanic rocks. Volcanic or sedimentary strata host the deposit; all of which form integral parts of a volcanic complex. The deposits are comprised of two parts: massive sulfide that formed immediately below the seafloor, the second part is vein and disseminated ore that immediately underlies the massive sulfide ore. Deposits of the volcanic-associated massive sulfide type are important sources of copper, zinc, and lead; many deposits contain economically

recoverable gold and silver. Byproducts are commonly cadmium, tin, indium, bismuth, and selenium (Franklin, 1996, p. 158).

1. Cyprus Type Mineralization

Cyprus-type deposits are often located in an ocean-ridge or island setting with basalt and pillow lava as host rocks. These display hydrothermal alteration from the mineralizing fluids. The top of the deposit will commonly have and iron-rich sediment, then followed by massive sulfides, and a lower copper-rich stockwork zone. Underlying the mineralization sequence are more mafic rocks such as ultramafic cumulates, pyroxenite, dunite and harzburgite. Within the ,dunite and harzburgite additional deposits of podiform chromites may be found, these are Cu-Ni-Co-Fe sulfide deposits. Cyprus-type VMS deposits are relatively high in copper, and low in zinc and lead but can have moderate grades in gold and silver. Table 3 outlines the main Cyprus-type deposits, reserves and economic metals of the deposits.

Cyprus Mine	Reserves (M Tons)	Cu%	S%	Zn%	Pb%	Ag ppm	Au ppm	Source
Mavrovouni	15	4	47	0.5	-	39	0.3	Bear (1963)
Skouriotissa	6	2.3	48	0.06	-	-	-	Bear (1963)
Kalavasos	2.3	1.5	33	0.7	0.01	5.7	1.6	Bear (1963)
Limni	4	1.4	-	0.29	-	2.7	0.51	Bear (1963)

Table 3 Typical grades of Cyprus-type deposits in Cyprus, Greece.

3. Besshi-Type Deposits

Besshi-type VMS are deposited in a variety of settings, that include rifted continental margins, intracontinental rifts, back-arc basins and sediment-covered spreading ridges proximal to continental land masses, mid-ocean ridges and intra-plate back-arc basalt volcanic vents. The lithology is predominantly tholeiitic pillow lava. There is a lack of felsic volcanism and the alteration mineralogy lacks barite and anhydrite. Thick sequences of continentally derived clastic sediments, such as greywacke, argillite and siltstones, deposit rapidly. The deposit occurs proximal to the vent location and is stratabound. Besshi-type deposits are often viewed as a Cyprus-type deposit caught up in a rapid sedimentation process. Examples of this deposit type are: Besshi, Japan; Gossan Lead, United States; Windy Craggy, Canada; Matchless, Namibia; Tverfjell, Norway; Saladipura, India; Liwu, China; Kizil-Dere, Georgia; Rapu-Rapu, Philippines; Altin-Tepe, Romania. Median grades are 1.3 Mt of 1.43% Cu

commonly with significant zinc, silver, and gold credits. The massive Windy Craggy deposit reports 297 Mt with 1.4% Cu, 0.3% Zn, 4% Ag, and 0.2 g/t Au.

4. Kuroko-Type Deposits

Kuroko-type deposits are typically associated with highly differentiated volcanic sequences of basalt, andesite, dacite, and rhyolite. Mineralization is distinctly associated with rhyolite. The economic metals are Pb, Zn, Ag, Au, and lesser Cu. The ore is commonly massive and poorly bedded near the top of the deposit, and is dominated by Pb, Zn, Ba, and Cd, whereas the base of the deposit is copper-rich. This deposit type model originated from the Green Tuff Belt in Japan, where there are 27 different sulfide lenses in 7 different deposits. The deposits average grade is 1.63% Cu, 3.86% Zn, 0.92% Pb, 95.1 g/t Ag, and 0.9 g/t Au in the Green Tuff Belt. The average tonnage of these 7 deposits is 5.8 Mt. In the Finlayson Belt, three other Kuroko-type deposits have been discovered. These are Kudz Ze Kayah, Wolverine and GP4F. The resources are detailed in Table 4.

Finlayson District Resources						
	Tonnes	Zinc	Lead	Copper	Silver	Gold
Kudz Ze Kayah [1,4]						
indicated	13,720,000	6.0%	1.61%	0.90%	139.2 g/t	1.38 g/t
Wolverine – main lens						
indicated [1]	4,941,000	13.00%	1.58%	1.43%	379.4 g/t	1.76 g/t
inferred [1]	498,000	13.61%	1.70%	1.36%	365.3 g/t	1.51 g/t
upper lens – inferred [2]	343,000	13.11%	1.85%	0.80%	354.2 g/t	1.39 g/t
GP4F [3]						
inferred	1,500,000	6.40%	3.10%	0.10%	90 g/t	2.00 g/t
Total Indicated Resource	18,661,000	7.85%	1.60%	1.04%	202.8 g/t	1.48 g/t
Total Inferred Resource	2,341,000	8.92%	2.62%	0.47%	187.3 g/t	1.81 g/t

[1] Resource estimates for Kudz Ze Kayah and main lens of Wolverine by Hatch Associates Ltd., November 2000.
[2] Inferred Resources for upper lens by Westmin Resources Ltd, 1998
[3] Inferred Resource for GP4F estimated by Cominco Ltd., 1998 Annual Report
[4] Kudz Ze Kayah & GP4F are owned by Teck Cominco Metals Ltd.

Table 4 Finlayson District Resources.

B. Mesothermal Gold Veins

This type of deposit occurs as simple to complex quartz-carbonate vein systems associated with brittle-ductile shear zones and folds in deformed and metamorphosed volcanic, sedimentary, and granitoid rocks. In these deposits, gold occurs in veins or as disseminations in the immediately adjacent altered wall rocks. Overall, gold is the significant economic commodity. The veins occur in structural environments characterized by low- to medium-grade metamorphic rocks and brittle-ductile rock behavior, this corresponds the intermediate depths within the crust, and by compressive tectonics (Robert, 1995, p.350). Minor occurrences of this deposit type have been noted in the district.

C. Intrusion Related Gold Deposits

This style of deposit is diverse in setting, there are three end members differentiated by tectonic environment. These are intra-continental orogenic collapse, intra-continental anorogenic magmatism and extension along a subduction-related continental margin. All of these environments have significant igneous activity, which is related to mantle underplating, high heat flow and source rocks that are relatively oxidized. Key features of this deposit type are: that they are localized by tectonic features, including volcanic structures in high-level systems; abundance of iron minerals other than sulfides such as magnetite or hematite; vein-breccia-replacement styles of mineralization; and ore element association Cu with Au and/or Ag. Minor elements include Co, U, Ba, F and rare earth elements. It is not expected that this deposit style is a predominant one in the Finlayson district, however previous exploration has noted several occurrences of intrusion related gold.

VIII. Property Geology

A. A. Ice Property Scale Geology

1. Introduction

In 1997, Expatriate performed reconnaissance mapping and prospecting across the entire property and detailed mapping in the immediate vicinity of the Ice Deposit. The Ice property is located 1 to 3 kilometres 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. Plint and Gordon (1997) state that whole rock geochemistry and depositional environments are consistent with a deep submarine basin in either a marginal or ocean basin setting. Based on lithologic similarities to other rock types in the region, Mortenson (1992) infers depositional ages to be Devonian to Triassic. Plint and Gordon (1992) collected two samples from Slide Mountain Terrane rocks slightly south and east of the Ice property; these yielded late Palaeozoic (Mississippian-Permian) fossil ages.

2. Geology in the Drill Area

Geology in the Ice deposit drill area was compiled at a scale of 1:2000 and is based on mapping of outcrops and drill access roads, logging of diamond drill holes and interpretation of ground magnetometre and electromagnetic response. The area is underlain by relatively unstained, 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 Pigage and described in Eaton and Pigage (1997). Plate 2 contains detailed drill geology mapping.

3. Lithology

Volcanic rocks in the drill area consist of massive basalt (MSBS), porphyritic pillow basalt (PHBS) and autobrecciated pillow basalt (BRBS). Interbedded with the basalts are black, grey, green and red ribbon chert (RBCH), massive green and red chert (MSCH), greywacke (SDST) and carbonaceous mudstone (CBMS). Figure 3 illustrates a stratigraphic column for the drill area.

4. 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 metres thick (Figure3). The rock is characteristically medium green with a pale pink to purple tinge. It is generally nonmagnetic and non- to slightly calcareous. Pillows ranging up to 1.5 metres in diameter are commonly observed in outcrops but are not readily visible in drill core. Red and green chert forms interstitial aggregates

between some pillows. Outcrops often exhibit autobrecciated textures and radial fractures within the pillows.

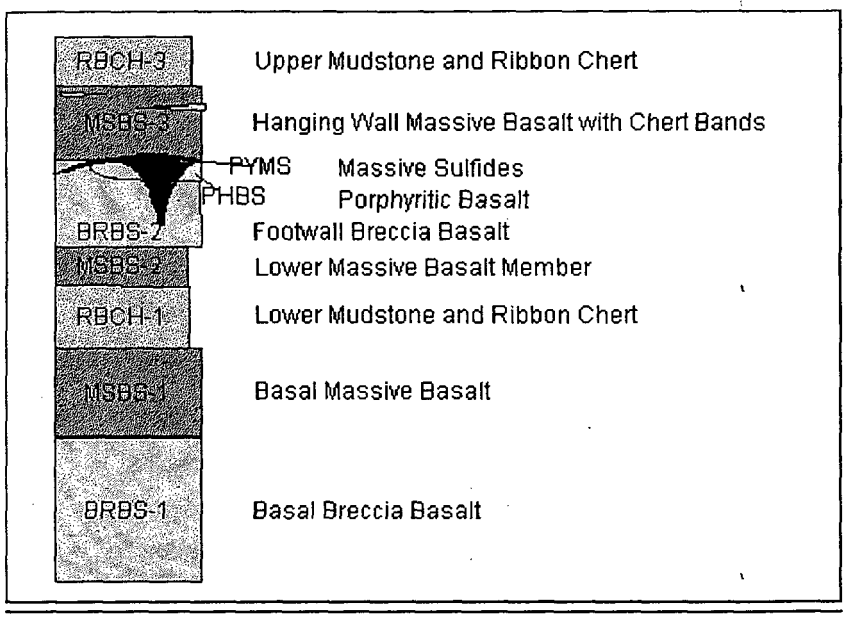


Figure 3 Stratigraphic column of Ice deposit area geology

5. Basal Massive Basalt ($MSBS_1$)

$BRBS_1$ is conformably overlain by green, medium- to coarse-grained, equigranular massive basalt ($MSBS_1$) (Figure 3), which ranges between 70 to 90 metres 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.

6. Lower Mudstone and Ribbon Chert ($RBCH_1$)

Conformably overlying $MSBS_1$ is a 50 to 70 metres thick sequence of interbedded carbonaceous mudstones and ribbon cherts (Figure 3). 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 micaceous sheen on fresh surfaces. They are typically coated with a patchy medium brown limonite on weathered surfaces.

7. Footwall Massive Basalt ($MSBS_2$)

$RBCH_1$ is conformably overlain by 30 to 40 metres of homogenous, medium-grained equigranular massive basalt ($MSBS_2$) (Figure 3). 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.

8. Footwall Breccia Basalt ($BRBS_2$)

Footwall breccia basalt ($BRBS_2$) is 65 to 90 metres thick and is lithologically very similar to $BRBS_1$. Stringer sulphide mineralization is common within $BRBS_2$ and in a few areas, a massive sulphide horizon (PYMS) lies between $BRBS_2$ and overlying $MSBS_3$. In Figure 3, the massive sulfide horizon is red in colour.

9. Porphyritic Basalt (PHBS)

An aphanitic, medium green to dark grey-green, noncalcareous porphyritic basalt (PHBS) usually overlies $BRBS_2$. PHBS has been drilled over the entire Ice deposit resource area and is a key rock type linked to the mineralization process. The massive sulphide horizon (PYMS) normally occurs between PHBS and overlying $MSBS_3$. Stockwork sulphides are locally developed within PHBS. In Figure 3, the PHBS is the rock type immediately adjacent to the massive sulfide horizon.

10. Hanging Wall Massive Basalt ($MSBS_3$)

Overlying PHBS, PYMS, or $BRBS_2$ is a medium grained, medium to dark green, equigranular, homogenous massive basalt ($MSBS_3$), which resembles the massive basalt units $MSBS_1$ and $MSBS_2$. Massive grey, red, or green cherts occur as thin local interbeds within $MSBS_3$ (Figure 3).

11. 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 metres thick and is lithologically similar to $RBCH_1$ (Figure 3).

12. Metamorphism

Relic primary mineralogy in the basalts consists dominantly of plagioclase laths with interstitial clinopyroxene. This primary mineralogy is 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.

13. Structure

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 (Plate 2). Structural analysis shows southeast-dipping beds with a mean bedding orientation of 050/49 SE. The greatest concentration of primary bedding measurements is at 040/38 SE.

The oldest structure in the Ice deposit drill area is four northwest trending faults, which have small displacements of 10 to 100's of metres (Plate 2). It is uncertain whether the faults are dominantly strike-slip or dip-slip. The youngest faults in the Ice deposit area are three steep, northeast-trending faults (Plate 2).

IX. ICE DEPOSIT DESCRIPTION

The Ice property host's copper±gold±silver±zinc±cobalt VMS mineralization. Primary copper minerals are found in massive sulphide horizons and stockwork zones as chalcopyrite with pyrite and occasional bornite. Secondary copper minerals occur above or peripheral to the primary mineralization and were formed either by in situ oxidation or precipitation following leaching and groundwater transport.

A total of 121 diamond drill holes (10,584 metres) have been completed on the Ice property, 87 of which were drilled in 1997. All but six of the drill holes were drilled in a 600 by 400 m area. The outlying drill holes tested soil geochemical anomalies. These holes failed to intersect significant mineralization and the anomalies were attributed to glacial or groundwater dispersion.

The best assay results were obtained near the centre of the drill area in a 350 m long, approximately 50 m wide zone consisting predominantly of primary massive sulphide mineralization. Copper intersections within this zone include: 5.20% over 20.56 m (drill hole IC96-34), 8.56% over 5.92 m (ID97-11), 3.57% over 28.55 m (ID97-13), 4.09% over 7.55 m (ID97-20), 4.31% over 19.75 m (ID97-36), 3.47% over 25.09 m (IC97-46), 3.20% over 28.51 m (IC97-57), 3.79% over 5.69 m (IC97-70) and 4.18% over 8.97 m (IC97-84). This high-grade core is surrounded by a broad halo containing thick

intersections of lower-grade mineralization. Copper grades in the halo typically range from 1.5% to 3% in massive sulphide, 0.5 to 1.2% in stockwork sulphide and 0.2 to 1.5% in secondary mineralization. The massive sulphide mineralization usually contains potentially significant gold (0.2 to 0.8 g/t), silver (2 to 20 g/t), cobalt (0.02 to 0.08%) and zinc (0.2 to 0.6%). Multi-element analyses indicate that no significant detrimental elements are present in the mineralization.

Diamond drilling at the Ice property has defined an indicated mineral resource of 4,561,863 tonnes grading 1.48% copper, including about 3.4 million tonnes of near-surface mineralization at the same grade. Mr. I.S. Thompson, P.Eng, audited the resource calculations of Derry, Michener, Booth & Wahl Consultants Ltd., his report concludes that the resources "have been correctly estimated and represented by Expatriate". The indicated resource is overlain by a significant amount of additional near surface oxide copper mineralization for which there is insufficient data to estimate a resource. Although existing drilling largely closes off the deposit, the Ice property is large and most of the favorable stratigraphy is untested.

X. 2002 Field Program

The program focused on re-assessment of the resource that was calculated by Becker (1998a) and Thompson (1998) as well as geologic aspects of the resource that was established by Eaton and Pigage in 1997.

Bradshaw G. and Tindle. J. were present on the property from July 1stth to 14th, 2002 and completed 28 person days of work. This work was supervised by Duncan, R. and this report primarily written by Moore, J. and Bradshaw, G.

The new calculated resource does not conform to NI 43101 guidelines. The estimation does not use categories stipulated in sections 1.3 and 1.4, and does not provide categories for the estimation. This resource is intended for in-house evaluation of the Ice deposit by Expatriate Resources Ltd.

XI. STATEMENT OF EXPENDITURES

I, Jill A. Moore, as agent for Expatriate Resources Limited, #701-475 Howe Street, Vancouver, B.C. do solemnly declare that re-evaluation of drill core from the Ice deposit was carried out on the Ice claim block intermittently between June 1st and July 14th 2002. The drill core is stored at the Ice camp located on the property.

ACCOMMODATION & MEALS	$1,429.18
Camp Expense	$128.46
Drafting, Printing & Reproduction	$425.00
Helicopter	$11,016.68
Communications	$159.86
Equipment Rentals	$575.00
Fuel	$120.88
Wages	$4,700.00
Material & Supplies	$976.66
Truck Rental	$1,731.49
Report	$1,000.00
TOTAL	$22263.21

I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the Province of British Columbia this 15_th day of July, 2003.

Jill A. Moore
Project Geologist

XII. 2002 Field Program Results

A. Objectives

The objective of the 2002 field program was to determine the nature and continuity of the high-grade core of the deposit by examination of drill core. Particular emphasis was on mineralogy, such as bornite distribution. Bornite has a higher percentage of copper Mineralogically, and this is where the high-grade core of the deposit should be interpreted to be. Additionally, evaluation of structure was a logging objective. Previous authors relied heavily on structural constraints, such as faults, to interpret the geology and the deposit. However, Cyprus-type mineralization is often interpreted to not be structurally constrained.

B. Methodology

All drill holes that contained high copper grades were examined and the following information was recorded: hanging wall lithology, footwall lithology, thickness of massive sulphide interval (if present), abundance of bornite, abundance of chalcopyrite, and thickness and location of hematitic chert horizon (if present). Presence of significant faults, mineral zoning, oxidation and secondary copper mineralization were also noted.

C. Results

1. General Description and Morphology

The Ice deposit is a strata-bound replacement pyrite-chalcopyrite-bornite massive sulphide lens hosted in massive basalt. It has been defined over a strike length of 1000 metres and approximately 500 metres down-dip to the southeast. It is eroded on the northwest up-dip edge and is oxidized where it is located near the surface in the southwest. In this area, oxide minerals and not massive sulphide generate high copper grades. The average thickness of the sulphide sheet is 4.94 metres with a central core of 15 – 16 metres. The high grade core of the deposit, which contains bornite, is defined by 6 drill holes, appears to be oriented east-west, and extends for approximately 300 metres along strike and 80 metres down dip. It is located 22 metres below surface on the westernmost portion and 82 metres below surface on the easternmost portion, due to topography. That portion of the high-grade massive

sulphide that is closest to surface could be accessed by a shallow decline with an approximate length of 100 metres.

2. Geology

The massive sulphide body is hosted completely within green, fine-grained, massive meta-basalt, with the exception of narrow (5 cm to 2.7 m) red hematitic meta-chert horizons that occur at the upper and lower contacts. The hanging wall is typically massive and unaltered meta-basalt. The footwall is variably brecciated and altered but is thought to be the same lithology. Alteration generally consists of quartz and less commonly epidote amygdules surrounded by light brown fine-grained masses of cordierite(?) within brecciated meta-basalt. The most proximal alteration consists of chlorite within a brecciated quartz, pyrite and hematite stockwork. This intense stockwork zone is commonly separated from the overlying massive sulphide by up to 30 metres of massive, or auto-brecciated meta-basalt. This is puzzling and may reflect later deformation. The geological data is summarized in Table 5.

DDH	HW	From	To	TT (m)	FW	Bn	Cpy	Hm Chert	Comments
IC96-06	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	17.4 to 21.3 has Cu oxide on fractures
IC96-08	oxidized bslt w qtz + py	18.95	20.85	1.90	bx bslt w chl altn	0	0	none	azurite noted in hw and fw
IC96-13		47.00	56.80	7.28		0	2		zone not located in core - interval estimated from sections
IC96-16		0.00	0.00	0.00		0	0		no massive sulphide present
IC96-34	msv bslt	72.27	92.57	15.55	msv bslt	4	3	minor	excellent intersection
IC97-36	oxidized bx bslt	0.00	0.00	0.00	oxidized bslt	0	0	none	strongly oxidized
IC97-38		0.00	0.00	0.00		0	0		hole not studied
IC97-39	ferricrete	0.00	0.00	0.00	msv bslt	0	0	none	strong ep + hm altn w limonite
IC97-40	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	strongly oxidized
IC97-41	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	Cu oxides on fractures in bslt
IC97-46	boxes missing	31.77	35.66	3.89	white altd bslt	0	3	unknown	chalcocite replaces pyrite near hw ct
IC97-49	oxidized bslt bx	0.00	0.00	0.00	altd bx bslt	0	0	none	strongly oxidized
IC97-57	flt bx in bslt	12.70	20.80	8.10	white altd bslt	0	2	none	Cu oxides near top, ab chalcocite + covellite near base
IC97-64	qtz + sx rubble	22.00	22.30	0.30	qtz + py in altd bslt	0	0	none	chalcocote w green Cu oxides
IC97-70	msv bslt	33.42	37.10	3.68	altd bslt	1	2	hw- 2.4 m	stg altn in fw w possible flt - Cu oxides near top
IC97-82	bx bslt	12.75	16.50	3.75	altd bslt w qtz + py	0	0	none	minor Cu oxides, strong oxidation
IC97-84	large fault	21.95	26.65	4.70	white altd bslt	4	1	none	bornite throiughout interval
ID97-01	msv bslt	83.10	90.98	7.61	bx bslt	0	2	none	oxidized, green Cu at top, altn is very weak
ID97-03	msv bslt	94.10	97.35	3.05	altd bslt - amgd	0	1	hw- 5 cm, fw- 15 cm	good low grade massive sulphide
ID97-04	msv bslt	51.21	55.78	3.50	altd bslt - amgd w/i flt	0	1	hw- 10 cm	big fault at base
ID97-07	msv bslt w ep veins	77.02	78.18	1.14	altd bslt - amgd w ep	0	3	none	minor Cu oxides, qtz + py stgrs w/o hm
ID97-08	msv bslt	73.80	75.10	1.00	altd bslt	0	2	fw- 30 cm	brownish altd bslt in fw
ID97-11	altd bslt	88.60	93.88	4.10	altd bslt w flt	0	4	none	altn in hw, flt in fw
ID97-12		92.25	93.50	0.94		0	0		not studied - low grades
ID97-13	msv bslt	89.25	101.31	9.24	qtz + py bx	5	3	hw - 10 cm	cpy increases toward base - excellent bornite
ID97-14	msv bslt	107.85	114.10	4.86	strong altn in bslt	0	3	hw- 30 cm, mid- 50 cm	very strong fw altn
ID97-16	msv bslt	130.65	135.55	4.73	altd bslt	0	3	hw- 60 cm, fw- 80 cm	strg fw altn (brown)
ID97-18	msv bslt	0.00	0.00	0.00	py-hm stwk	0	0	none	sx lens poorly defined
ID97-19	msv bslt	93.87	96.25	2.22	altd bslt - amgd	0	1	hw- 5 cm, fw- 15 cm	good low grade massive sulphide
ID97-20	msv bslt	86.72	93.30	6.01	msv bslt - amgd	2	2	fw- 80 cm	bornite increases toward base
ID97-26	msv bslt	87.55	90.70	2.96	altd bslt	0	3	hw- 15 cm	yellow-brown fw altn
ID97-30	msv bslt - fault	30.00	39.65	7.06	flt bx in bslt	0	3	hw- 60 cm	strong brecciation - qtz + py
ID97-31	msv bslt	45.60	46.33	0.56	flt in altd bslt	0	1	none	Cu oxides at base

Table 5 Drill Log Summary

3. Structure

Faults are common in drill core as evidenced by gouge zones up to several metres in thickness. However, it is unclear from the available evidence whether any of these faults cut or otherwise control the morphology of the massive sulphide deposit. There is certainly good evidence for several northeast trending faults (e.g. the baseline fault), but it is doubtful that these faults displace the massive sulphide as shown in previous work (Becker, 1998a). The position of the sulphide horizon can be easily explained by folding or warping of the stratigraphy in most cases. Even on section 11250N, the apparent displacement of the massive sulphide could be due to folding of the stratigraphy and discontinuity of the sulphide horizon. More drill holes would be necessary to completely assess the effect of structure on the continuity of mineralization.

4. Resource Calculation

A sectional resource was calculated using the computer program Discover in Mapinfo. The position of the massive sulphide horizon on 9, 50 metre window, cross sections was interpreted from available drill core data, and length weighted averages were calculated for copper over each intersection (gold was not considered because assays were not available from all of the sulphide intersections). Copper grades were then interpolated between drill holes on each section using an inverse distance weighted algorithm with a 1 metre grid block size. A 75 metre by 25 metre search ellipse oriented at 120 degrees was used to search for drill hole data and the results were clipped to the interpreted sulphide lens shape. A calculated global average specific gravity of 4.00 was used for the density of the massive sulphide.

5. Results

A sectional resource of 1 Million tonnes @ 4.32% Cu of sulphide material was defined over a strike length of 450 metres and down – dip extent of 220 metres (Table 6). Average thickness is 4.94 metres with a thicker central core of 15 – 16 metres. Assuming a mining thickness of 3 metres, the resource would be diminished to approximately 850,000 tonnes @ 4.29% Cu.

Section	Tonnes	Cu Grade (%)
11100N	7494	4.99
11150N	24038	6.14
11200N	99396	5.13
11250N	139543	4.05
11250N	7072	7.42
11300N	340939	3.65
11350N	201597	4.23
11400N	146343	5.71
11450N	13536	2.6
11500N	20828	2.18
Total	1000786	4.32

Table 6 Large Lens Polygons Mineralization.

XIII. STATEMENT OF QUALIFICATIONS

I, J. A. Moore, of 39147-3695 W. 10th Ave. Vancouver, V6R 4P1, in the Province of British Columbia, Canada, do hereby certify:

- I am a graduate of Prescott College in Prescott, Arizona, U.S.A, with a B. A. in Environmental Geology (1996). I completed a postgraduate degree at Rhodes University in Grahamstown, South Africa. I was admitted to the degree of M. Sc. in Mineral Exploration in 2002.

- Since 1991, I have been involved in the exploration and exploitation of precious metals and diamonds in British Columbia, NWT, Central America, the eastern shields of South America, and West Africa.

- The information, conclusions, and recommendation in this report are based on collaboration of other professional colleagues involved with various aspects of exploration on the property and in review of the literature stated in the bibliography. I have prepared this report on behalf of Expatriate Resources Ltd.

- This report may be used for the development of the property, provided that, no portion will be used out of context in such a manner as to convey meanings different from that set out in the whole.

- I am unaware of any material fact or material change with respect to the technical matter of this report that might cause the technical report to be inaccurate or misleading.

- I am a Geologist in the employ of Expatriate Resources Limited with offices at #701-475 Howe Street, Vancouver, British Columbia.

- I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated June 2nd 2003 Signed J.A. Moore

J. A. Moore, M.Sc.

I, Robert A. Duncan of #301 1562 West 5th Avenue, Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employ of Expatriate Resources Limited with offices at #701-475 Howe Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining companies in North West Territories, Nunavut, Manitoba, Saskatchewan, British Columbia, Yukon Territory, and the United States of America, for twelve years.

3. THAT I am a graduate of the University of British Columbia and hold a Honours Bachelor of Science in Geology (1996) and a Master of Science in Geology (1999).

4. THAT this report is based upon work which I supervised between July 1st to 14th, 2002.

5. THAT I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated June 2nd 2003 Signed _____
Robert A. Duncan, M.Sc.

YUKON ENERGY, MINES
& RESOURCES LIBRARY
P.O. BOX [illegible]
WHITEHORSE, YUKON Y1A 2C6

I, Geoffrey Bradshaw of 3509 West 42nd Avenue, Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:

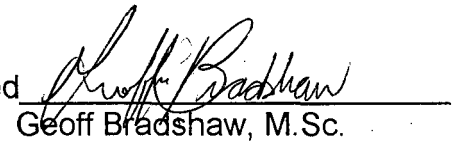
1. THAT I am a consultant geologist and was employed by Expatriate Resources Limited between July and August, 2002. Expatriate's office is located at #701-475 Howe Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining and exploration companies in B.C., Yukon, Chile, and Argentina.

4. THAT I am a graduate of the University of British Columbia and hold a Honours Bachelor of Science in Geology (1996) and a Master of Science in Geology (2003).

4. THAT this report is based upon field work which I completed between July 1st to 14th th, 2002.

5. THAT I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated June 3/ 2003 Signed 

Geoff Bradshaw, M.Sc.

XIV. REFERENCES

Becker, T.C., 1997, Assessment Report describing Geological Mapping, Prospecting, Soil Geochemistry and Airborne Geophysical Surveys on the Ice Property, December 1997: Internal Report for Expatriate Resources Ltd., p.1-20.

Becker, T. C., 1998, Assessment Report describing Geological Mapping, Prospecting, Soil Geochemistry, and Diamond Drilling on the Ice Property, May, 1998: Internal Report for Expatriate Resources Ltd. p, 1-39.

Becker, T.C., 1998a, Report Describing Mineral Resource Calculations at Ice Property, May 1998: Internal Report for Expatriate Resources Ltd., p. 1-11.

Burget, A. 1997. Assessment Report describing Geochemical, geophysical and claim Surveys on the Power Play Property January, 1997: Internal Report for Expatriate Resources Ltd. p. 1-24.

Eaton, W.D. and Pigage L.C., 1997, Assessment Report Describing 1996 Geological Mapping, Prospecting, Soil Geochemistry, Geophysical Surveys and Diamond Drilling on the Ice Property, May 1997: Internal Report for Expatriate Resources Ltd., p. 1-34.

Franklin, J.M., 1996, Volcanic-associated massive sulphide base metals: *in* O.R. Eckstrand, W.D. Sinclair and R.I. Thorpe (eds.), Geology of Canadian Mineral Types, Geological Survey of Canada, Geology of Canada, No. 8, p.158-183.

Galley, A.G. and Koski, R.A., 1997, Setting and characteristics of ophiolite-hosted volcanogenic massive sulphide deposits: *in* Barrie, C.T. and Hannington, M.D. (eds), Volcanic-Associated Massive Sulphide Deposits: Process and Examples in Modern and Ancient Settings, GAL-MMD-SEG p.253-280.

Johnston, S.T. and Mortensen, J.K., 1994, Regional setting of porphyry Cu-Mo deposits, volcanogenic massive sulphide deposits, and mesothermal gold deposits in the Yukon-Tanana Terrane, Yukon; Yukon Metallogeny: Recent Developments, Canadian-Yukon Economic Development Agreement, p.30-34.

Moore, J.A. and Klein, J. 2002, 2002 Geophysical Report For the Ice and Assist Claims in the Watson Lake Mining District Yukon Territory, Canada. Assessment report dated June 18th, 2002.

Mortensen, J.K. and Jilson, G.A., 1985, Evolution of the Yukon-Tanana Terrane: evidence from southeastern Yukon Territory: Geology, v.13, p.806-810.

Mortensen, J.K., 1992, Pre-Mid-Mesozoic Tectonic Evolution of the Yukon-Tanana Terrane, Yukon and Alaska: Tectonics, Vol.11, No.4, p.836-853.

Plint, H.E. and Gordon, T.M., 1997, The Slide Mountain Terrane and the structural evolution of the Finlayson Lake Fault Zone, southeastern Yukon: Canadian Journal of Earth Sciences, v.34, p.105-126.

Pritchard, R. A., 1997, Dighem^{V} Survey for Expatriate Resources Ltd., Finlayson Lake Area, Yukon flown October 28 to 31, 1996. Dighem, A Division of CGG Canada Ltd.: Internal Report for Expatriate Resources Ltd., p. 1-200.

Robert, F., 1995, Quartz-Carbonate Vein Gold: *in* Eckstrand, O.R. Sinclair, W. D., Thorpe, R.I. (eds.), Geology of Canadian Mineral Deposit Types. Ottawa, Canada, CCG Publishing, p. 1-640.

Stroshein, R.W. 1981, Assessment Report for Reno claims, Pelly River Area, Yukon for Hudson Bay Exploration and Development Company Limited, AR 090835.

Templeman-Kluit, D.J., Gordey, S.P. and Read, B.C., 1976, Stratigraphic and structural studies in the Pelly Mountains, Yukon Territory: Geological Survey of Canada Paper 76-1A, p.97-106.

Templeman-Kluit, D.J., 1977, Quiet Lake (105F) and Finlayson Lake (105G) map areas: Geological Survey of Canada, Open File 486.

Templeman-Kluit, D.J., 1979, Transported Cataclasite, Ophiolite and Granodiorite in Yukon: Evidence of Arc-Continent Collision: Geological Survey of Canada, Paper 79-14, 27 pages.

Thompson, I.S., 1998, Audit of Mineral Resources of Ice Deposit, Yukon for Expatriate Resources Ltd.: Internal Report for Expatriate Resources Ltd., p. 1-7.

Wengzynowski, W. A., 1996, Assessment Report Describing Prospecting and Geochemical Surveys on the Play 1-64 Property, April, 1996: Internal Report for Expatriate Resources Ltd., p. 1-20.

Wengzynowski, W. A., 1998, Descriptions of 1998 Prospecting at Ice Property and 1998 Relogging of Core from Redline and League Properties in the Finlayson Lake Area, Yukon Territory, March 1999: Internal Report for Expatriate Resources Ltd., p. 1-8.

Woolham, R. W., 1996, Report on a Combined Helicopter-Borne Electromagnetic and Magnetic Survey, by Aerodat Inc: Internal Report for Expatriate Resources Ltd., p. 1-200.

Plate 1

Ice Claims Map

365000 mE 366000 mE 367000 mE 368000 mE 369000 mE 370000 mE 371000 mE 372000 mE 373000 mE 374000 mE 375000 mE 376000 mE 377000 mE 378000 mE 379000 mE 380000 mE 381000 mE 382000 mE 383000 mN

6865000 mN 6864000 mN 6863000 mN 6862000 mN 6861000 mN 6860000 mN 6859000 mN 6858000 mN 6857000 mN

6869000 mN 6868000 mN 6867000 mN 6866000 mN 6865000 mN 6864000 mN 6863000 mN 6862000 mN 6861000 mN 6860000 mN 6859000 mN 6858000 mN 6857000 mN

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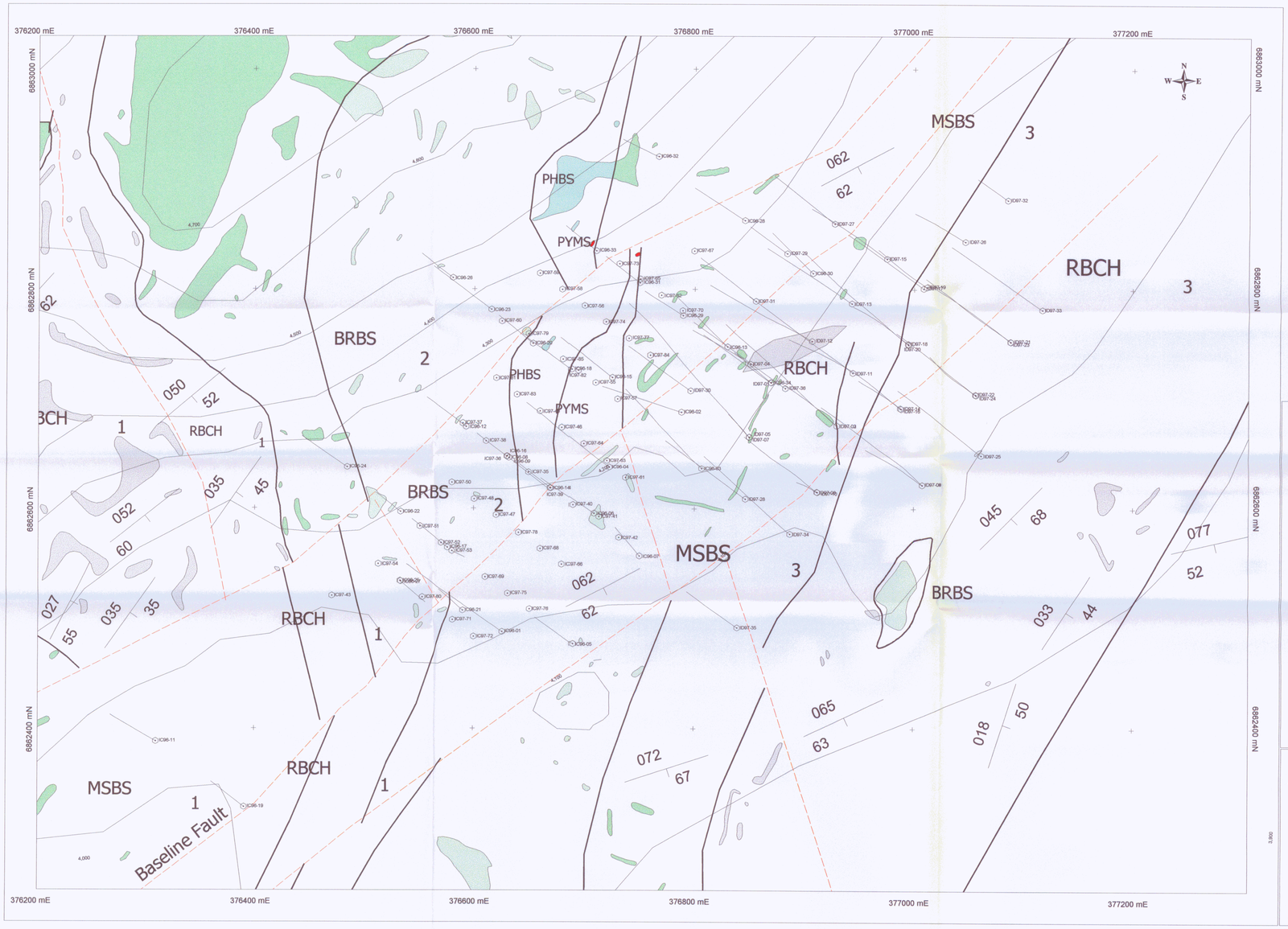
Expatriate Resources

	Ice Claims Map 2002 Ice Assessment Report Watson Lake Mining District NTS 105G 13 and 14
Date: 21/5/2003	
Author: J.Moore	
Office: Vancouver	
Drawing: Plate 1	
Scale: 1:25000	Projection: UTM Zone 9 (NAD 27 for Canada)

0 500 1000
metres

Plate 2

Ice Deposit Area Geology and Drilling Map



RBCH-3 Upper Mudstone and Ribbon Chert

RBCH Chert Bands

MSBS-3 Hanging Wall Massive Basalt with Chert Bands

PYMS Massive Sulfides

PHBS Porphyritic Basalt

PYMS-SSSG Stringer Sulfides Semi-Massive Sulfides and Stringer Sulfides

BRBS-2 Footwall Breccia Basalt

MSBS-2 Lower Massive Basalt Member

RBCH-1 Lower Mudstone and Ribbon Chert

MSBS-1 Basal Massive Basalt

BRBS-1 Basal Breccia Basalt

Fault
Drill Trace
Drill Collar
Geologic Contact

Expatriate Resources

Ice Deposit Area
Geology and Drilling Map
2002 Assessment Report

Watson Lake Mining District
NTS 105G 13 and 14

Date:26/5/2003	
Author: J.Moore	
Office: Vancouver	
Drawing: Plate 2	
Scale: 1:2000	Projection: UTM Zone 9 (NAD 27 for Canada)

0 25 50 100
metres

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Plate 3

2002 Delineation of Ice Deposit
High Grade Core

Chalcopyrite Abundance (0 - 5)

Bornite Abundance (0 - 4)

Sulphide Intersection

Cu grade (%) Length Weighted Average

True Thickness (m)

ID97-32 111.3m
ID97-26 164.6m
ID97-33 158.8m
ID97-27 110.0m
ID97-15 127.7m
ID97-17 132.3m
ID97-19 178.0m
ID97-21 195.3m
ID97-23 271.7m
ID97-18 193.3m
IC96-30 82.3m
ID97-29 63.1m
ID97-13 149.0m
ID97-20 157.0m
ID97-22 146.3m
ID97-24 159.4m
IC97-31 100.9m
ID97-11 190.2m
ID97-14 192.0m
ID97-16 193.9m
ID97-25 185.6m
ID97-12 167.9m
ID97-02 210.0m
ID97-01 211.1m
IC96-13 98.8m
IC96-31 61.6m
IC97-65 33.2m
IC96-29 65.8m
IC97-62 80.5m
IC97-70 49.4m
ID97-36 175.4m
IC96-34 114.9m
ID97-04 98.5m
ID97-05 264.0m
ID97-03 178.0m
ID97-06 188.7m
ID97-09 186.5m
IC97-77 45.4m
IC97-84 40.2m
ID97-07 175.0m
ID97-08 132.3m
ID97-10 150.0m
IC96-15 89.6m
ID97-30 103.0m
ID97-34 168.6m
IC96-20 63.7m
IC96-18 77.4m
IC97-85 43.3m
IC97-82 46.3m
IC97-55 36.0m
IC97-57 41.8m
ID97-28 145.7m
IC97-81 45.7m
IC97-83 46.6m
IC96-04 148.3m
IC97-49 29.3m
IC97-46 46.9m
IC97-64 36.9m
IC97-63 29.1m
IC97-61 40.8m
IC96-12 70.4m
IC97-37 39.9m
IC96-10 53.8m
IC97-38 34.7m
IC96-14 57.0m
IC96-08 92.7m
IC97-39 74.4m
IC97-40 35.4m
IC97-41 36.0m
IC97-42 15.2m
IC97-50 34.1m
IC97-48 32.3m
IC97-47 33.8m
IC97-78 31.1m
IC97-68 18.0m
IC97-66 17.4m

Expatriate Resources Ltd.

2002 Delineation of Ice Deposit
Sulphide High Grade Core

Date:15/08/2002
Author: RD
Office: Vancouver
Scale: 1:1000
Projection: Drill Grid

Scale: 1:1,000
0 10 20 30 50 100
metres

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9850mE 9900mE 9950mE 10000mE 10050mE 10100mE 10150mE 10200mE 10250mE 10300mE

1300mRL 1250mRL 1200mRL 1150mRL 1100mRL 1050mRL 1000mRL

IC97-37 IC96-12 IC97-38 IC97-40 IC96-06 IC97-41 IC97-42

IC97-37 39.9m
IC97-38 34.7m
IC96-12 70.4m
IC96-16 53.8m
IC97-36 41.8m
4.99 1.9
IC96-14 57.0m
IC97-39 31.7m
IC96-09 74.4m
IC97-40 35.4m
IC97-41 36.0m
IC97-42 15.2m
IC96-08 74.4m
IC96-06 92.7m

Chalcopyrite Abundance (0 - 5)

2.71 3.5
5.2 15.5
4.49 5.29
2.46 7.61
ID97-04 98.5m
IC96-34 114.9m

Bornite Abundance (0 - 4)

Sulphide Intersection

Cu grade (%) Length Weighted Average

True Thickness (m)

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Expatriate Resources

Ice High Grade Core
N11100

Date 16/6/2002
Author R Duncan
Office Vancouver
Drawing
Scale 1:1000
Projection: Custom Projection

0 10 20 40
metres

Plate 5

Section 11 150

9850mE 9900mE 9950mE 10000mE 10050mE 10100mE 10150mE 10200mE 10250mE 10300mE

1300mRL 1250mRL 1200mRL 1150mRL 1100mRL 1050mRL 1000mRL

IC97-81 IC97-83 IC97-49 IC97-46 IC97-64 IC97-63 IC96-04 IC97-61

OXIDE MATERAL

IC97-81
45.7m

IC97-83
46.6m

IC97-49
29.3m

6.14 3.89

IC97-46
46.9m

2.15 0.3

IC97-64
36.9m

IC97-63
29.1m

IC97-61
40.8m

ID97-28

ID97-28
97.7m

IC96-04
148.3m

ID97-28
145.7m

Chalcopyrite Abundance (0 - 5)

2.71 3.5

5.2 15.5

4.49 5.29

2.46 7.61

ID97-04
98.5m

IC96-34
114.9m

Bornite Abundance (0 - 4)

Sulphide Intersection

Cu grade (%) Length Weighted Average

True Thickness (m)

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Expatriate Resources

Ice High Grade Core
N11150

Date:15/6/2002
Author: R Duncan
Office: Vancouver
Drawing:
Scale: 1:1000
Projection: Custom Projection

0 10 20 40
metres

9850mE
9900mE
9950mE
10000mE
10050mE
10100mE
10150mE
10200mE
10250mE
10300mE

1300mRL
1250mRL
1200mRL
1150mRL
1100mRL
1050mRL
1000mRL

1300mR
1250mR
1200mR
1150mR
1100mR
1050mR
1000mR

ID97-26
ID97-33
2.18 2.96
ID97-33
158.8m
ID97-26
164.6m

Chalcopyrite Abundance (0 - 5)
Bornite Abundance (0 - 4)
Sulphide Intersection
Cu grade (%) Length Weighted Average
True Thickness (m)

22 7.28
2.71 3.5
5.2 15.5
4.49
5.29
2.46 7.61
ID97-04
98.5m
IC96-34
114.9m
97-12

Expatriate Resources

Ice High Grade Core
N11500

Date: 15/8/2002
Author: R Duncan
Office: Vancouver
Drawing:
Scale: 1:1000
Projection: Custom Projection

0 10 20 40
metres

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Plate 7

Section 11 200

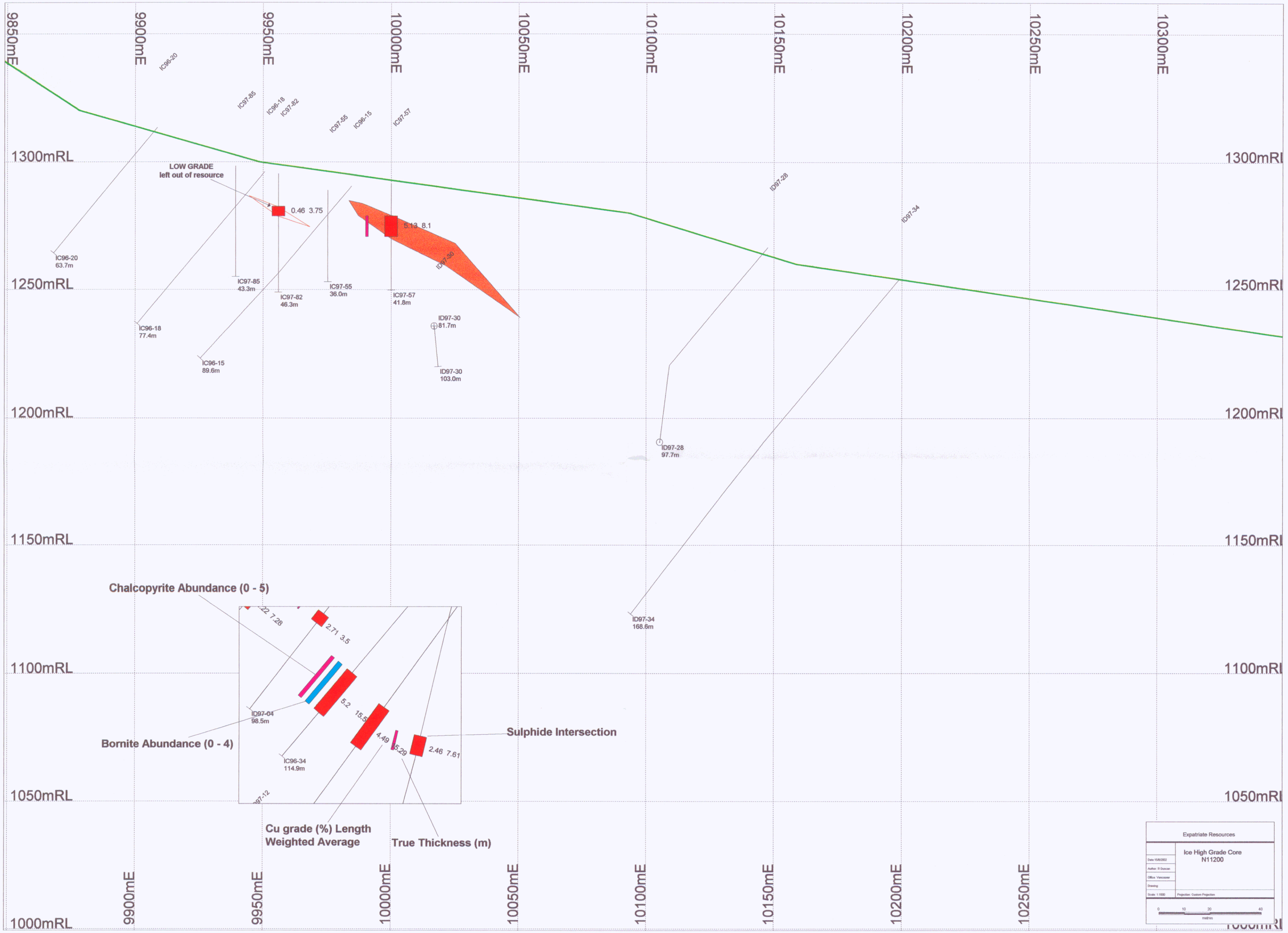

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Plate 8

Section 11 250

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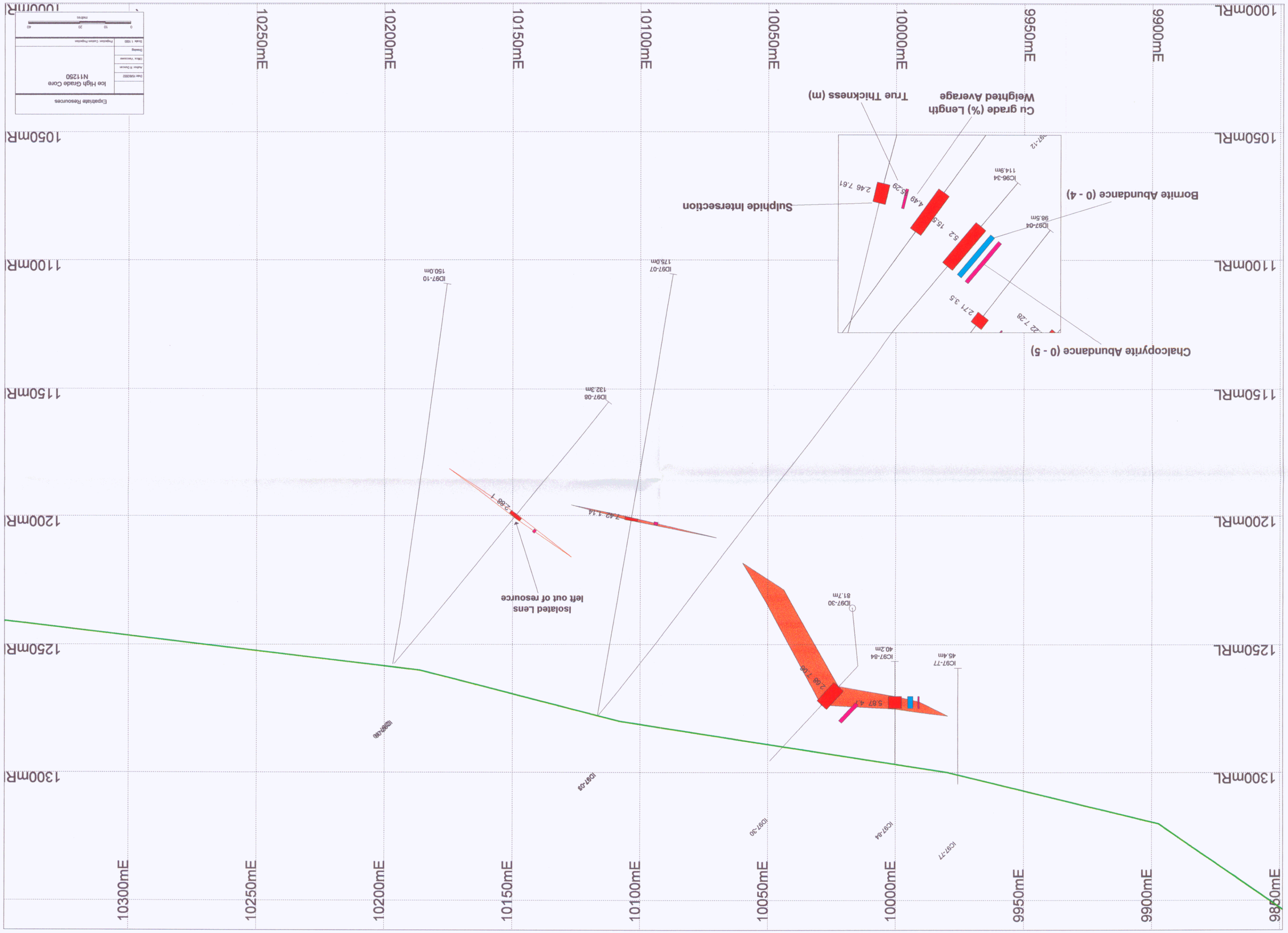

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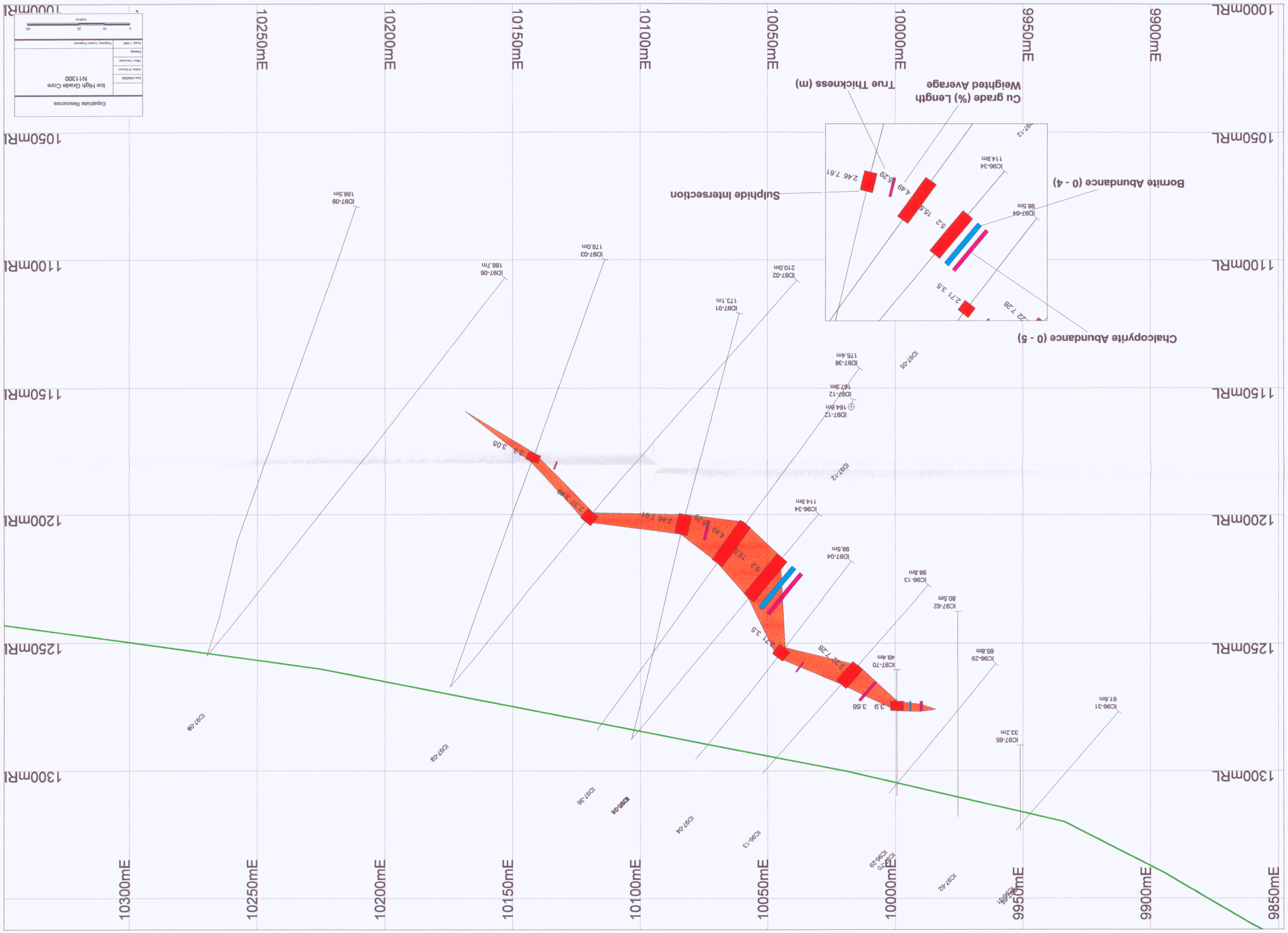

Plate 10

Section 11 350

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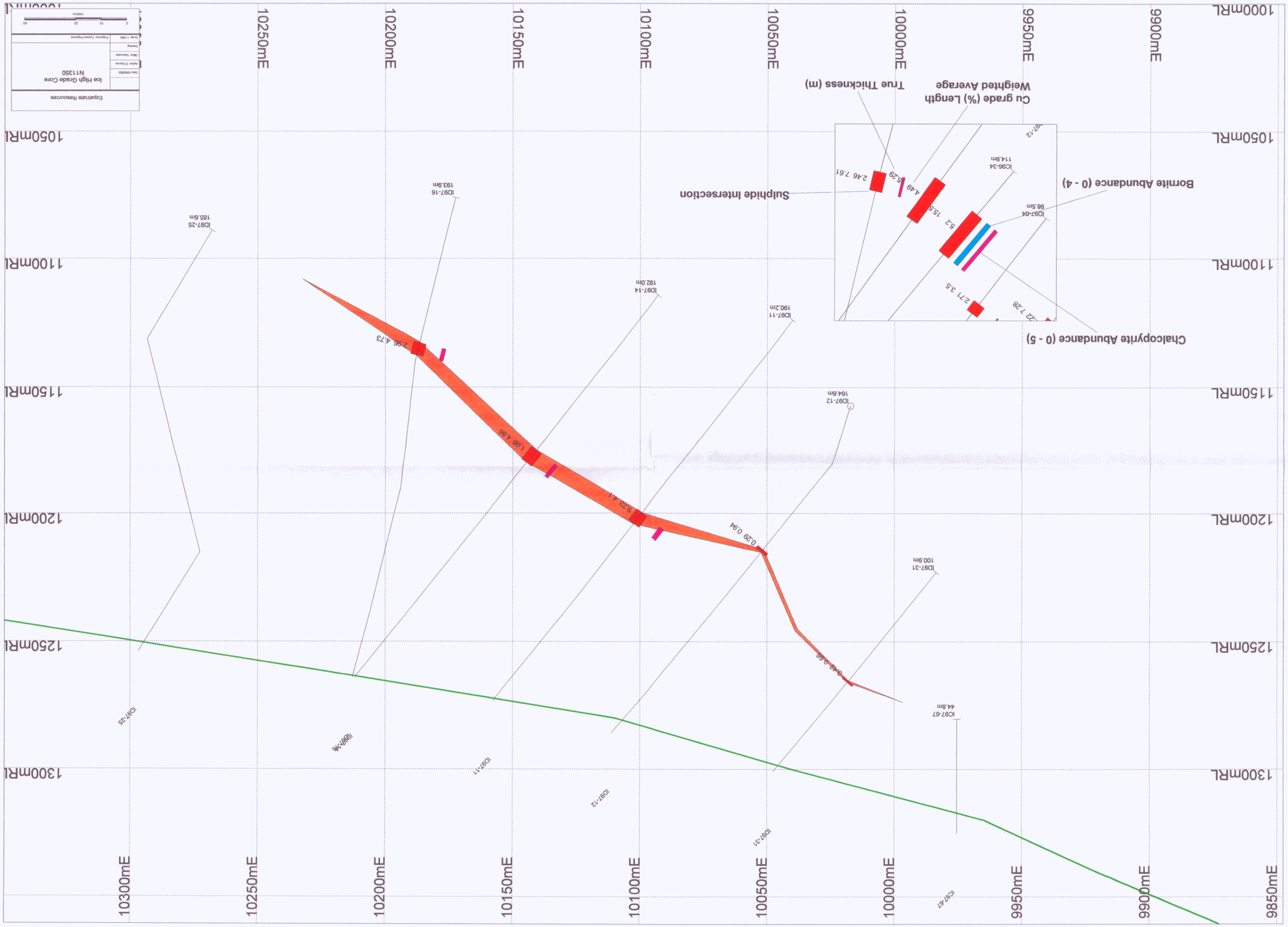

Plate 11

Section 11 400

9850mE 9900mE 9950mE 10000mE 10050mE 10100mE 10150mE 10200mE 10250mE 10300mE

1300mRL 1250mRL 1200mRL 1150mRL 1100mRL 1050mRL 1000mRL

ID97-29
IC96-30
ID97-13
ID97-18
IC96-22

ID97-29
83.1m

IC96-30
82.3m

6.27 9.24

4.86 6.01

ID97-13
149.0m

ID97-18
178.3m

ID97-22
146.3m

ID97-20
157.0m

ID97-24
159.4m

Chalcopyrite Abundance (0 - 5)

Bornite Abundance (0 - 4)

Sulphide Intersection

7.28

2.71 3.5

5.2 15.5

4.49 5.29

2.46 7.81

ID97-04
98.5m

IC96-34
114.9m

Cu grade (%) Length Weighted Average

True Thickness (m)

Expatriate Resources

Ice High Grade Core
N11400

Date: 15/8/2002
Author: R Duncan
Office: Vancouver
Drawing:
Scale: 1:1000
Projection: Custom Projection

0 10 20 40
metres

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PO. BOX 2703
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9850mE 9900mE 9950mE 10000mE 10050mE 10100mE 10150mE 10200mE 10250mE 10300mE

1300mRL 1250mRL 1200mRL 1150mRL 1100mRL 1050mRL 1000mRL

ID97-27
110.0m

ID97-15
127.7m

ID97-17
132.3m

ID97-21
155.4m

ID97-19
178.0m

ID97-23
271.7m

ID97-04
98.5m

IC96-34
114.9m

2.6 2.22

2.71 3.5

5.2 15.5

4.49 5.29

2.46 7.61

Chalcopyrite Abundance (0 - 5)

Bornite Abundance (0 - 4)

Sulphide Intersection

Cu grade (%) Length Weighted Average

True Thickness (m)

Expatriate Resources

Ice High Grade Core
N11450

Date 15/8/2002
Author R Duncan
Office Vancouver
Drawing
Scale 1:1000
Projection Custom Projection

0 10 20 40
metres

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Re Evaluation

Of The

Ice Massive Sulfide Deposit

Watson Lake Mining Division

Ice:	1-402,443-454,497-506,555,556,791-802,
	841-854,899-900,1042-1051,1072-1105

NTS:	105G13/
	and
	105G14.

	Central UTM Easting	**Central UTM Northing**
Ice Property:	374,334.74	686,2115.08

June 2nd, 2003

Prepared For:
Expatriate Resources Ltd.
701-475 Howe St.
Vancouver, British Columbia
Canada V6C 2B3

Prepared By:
J. Moore M.Sc. Geology
G. Bradshaw, M.Sc. Geology
R. Duncan, M.Sc. Geology

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Plate 10 Section 11 350

Plate 11 Section 11 400

Plate 12 Section 11 450

I. EXECUTIVE SUMMARY

The following report includes Expatriate Resources Ltd. wholly owned properties called Ice property. This property is located in the Watson Lake Mining District in the Yukon, Canada (Figure 1). Using the National Topographic System, they encompass 105G13 and 105G14.

Geologically, the Ice property is north of the boundary of the Yukon-Tanana and Slide Mountain geologic terranes (Figure 2). The northern portion of the map, where the Ice property is located, is within Yukon-Tanana terrane. The northeastern margin of the Ice property is the Finlayson Lake Fault Zone, a complex zone of steep and shallow faults related to transpressive suturing. The southwestern boundary of the Ice property is the Tintina Fault Zone, a major strike-slip fault with at least 450 kilometres of dextral displacement during Late Cretaceous and/or Early Tertiary time (Tempelman-Kluit et al., 1976).

Mineralization in these geologic terranes is primarily volcanogenic in origin, however, veins, skarns and asbestos occur. The volcanogenic occurrences are primarily Kuroko-type, although there is Besshi- and Cyprus-type deposits. The Ice deposit is an example of Cyprus-type mineralization.

A first pass phase of exploration has been completed on the Ice properties; this consisted of soil geochemistry, outcrop geologic mapping, prospecting and diamond drilling. Diamond drilling on the Ice claims resulted in the discovery of the copper-rich Ice deposit. The Ice deposit resource has been previously defined by 121 diamond drill holes.

The 2002 exploration program focused on re-assessment of the resource that was calculated by Becker (1998a) and Thompson (1998) as well as geologic aspects of the resource that was established by Eaton and Pigage in 1997. A sectional resource of 1 Million tonnes @ 4.32% Cu of sulphide material was defined over a strike length of 450 metres and down – dip extent of 220 metres. Average thickness is 4.94 metres with a thicker central core of 15 – 16 metres. Assuming a mining thickness of 3 metres, the resource would be diminished to approximately 850,000 tonnes @ 4.29% Cu.

II. LOCATION AND ACCESS

The Ice property is located in the Watson Lake Mining District in the Yukon, Canada. Using the National Topographic System, they encompass 105G13 and 105G14. The property coordinates, in Universal Transverse Mercator (UTM) and North American Datum (NAD) Zone 9 projection and coordinate system, as well as the size in square kilometres are summarized in Table 1.

	Central UTM Easting	Central UTM Northing	Total Square Kilometres
Ice	374,334.74	686,2115.08	99.40

Table 1 Ice property UTM locations.

The claim group is located 220 kilometres northeast of the major city of Whitehorse, Yukon and approximately 19 kilometres north of kilometre 279 on the Robert Campbell Highway (Figure 1). There are several ways in which to arrive at the Ice property main camp area.

Road access to the Ice property is via the Robert Campbell Highway. From there, the Mink Creek airstrip can be used as a staging area to supplies and personnel to and from the camps. With a land permit, the Mink Creek airstrip can be cleaned and graded, and subsequently used by short take-off and landing aircraft. The 1997 Mink Creek Land Use Permit was YA73X311.

Executive-style aircraft can use the government-maintained IFR airstrip at Ross River and then gain access to the property by helicopter. Additional fixed wing access is by float-equipped planes that operate from Gonzo Lake, 4 kilometres west of the Ice property camp and then gain access to the camp by helicopter.

In 1997, for an extensive drilling program at the Ice property, road access was established to the Ice property using Land Use Permit YA6F268. A Caterpillar D6 bulldozer was mobilized to the property using an access route, which extended 25 kilometres from the Robert Campbell Highway, to the Ice property camp. The bulldozer followed a pre-existing path for the first 19 kilometres. The bulldozer was utilized for moving drills, building drill sites, and constructing roads on the property. With minimal effort, this road could be re-established.

For the 2002 exploration program access to the property was gained by helicopter from the Inconnu Lodge staging area, which is owned and operated by Warren LaFave. The staging area is situated on the Robert Campbell Highway next to the Finlayson Lake campground area. The flight is approximately 20 minutes one way to the Ice property camp area.

Regional infrastructure, proximal to the Ice claims, is the cities of Ross River, Whitehorse and Watson Lake. All cities have airports, hospitals and local ground transportation systems. The closest power lines can be located at Ross River, approximately 60 kilometres to the west of the claim group (Figure 1). The electric power is sourced from hydroelectric power in Whitehorse. No serviceable railways exist in the Yukon.

III. TOPOGRAPHY AND PHYSIOGRAPHY

The Ice property is geographically situated on the Yukon Plateau and approximately 30 kilometres northeast of the Tintina Trench. The central part of the properties straddle a series of low ridges while the southern, eastern and western extremities cover broad swampy lowlands. Creeks in the western part of the properties 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 metres on the banks of the Pelly River to 1585 metres.

During Pleistocene time, a continental ice sheet covered the entire property. 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.

The vegetation is starkly contrasted by tree line, which occurs at approximately 1400 metres in elevation. 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 metres with buckbrush, slide alder, and scattered trees at higher elevations give way to grasses and lichens above 1400 metres. Vegetation transitions occur about 150 metres lower on north-facing slopes.

Climate in the Ice property area is categorized as continental. It is characterized by relatively long, cold winters with warm dry summers. Annual precipitation averages about 450 millimetres and occurs mostly as rain in summer. Snow cover rarely exceeds 60 centimetres. Permafrost is common in the area, however it is not pervasive. The local streams and water bodies usually break-up in late May and freeze over in early November. The weather conditions imply that winter drilling or ground geophysics done on snow and ice can be done at reasonable temperatures from February to April, summer drilling and ground exploration programs can be done from post break-up in late May until late October.

IV. CLAIM DETAILS

The Ice property was acquired by staking in 1996. In 1997, the Ice property was surveyed by Archer, Cathro and Associates (Becker, 1997; Becker, 1998). Claim posts were surveyed using a Trimble Geoexplorer GPS unit; field readings were corrected using base station data obtained from the Department of Renewable Resources (Forestry) in Whitehorse. This survey is not considered a legal survey. The Ice claims are listed in Table 2 and are on Plate 1.

Claim Group	Claim Number	Claim Number To	Fractions	Number of claims	Record Number From	Record Number To	Expiry Date
Ice	1	16		16	YB78632	YB78647	6-Mar-10
Ice	17	48		32	YB84405	YB84436	6-Mar-06
Ice	49	165		117	YB84880	YB84996	6-Mar-06
Ice	166		F	1	YB84997		6-Mar-06
Ice	167			1	YB84998		6-Mar-06
Ice	168		F	1	YB84999		6-Mar-06
Ice	169			1	YB85000		6-Mar-06
Ice	170		F	1	YB85001		6-Mar-06
Ice	171			1	YB85002		6-Mar-06
Ice	172		F	1	YB85003		6-Mar-06
Ice	173			1	YB85004		6-Mar-06
Ice	174		F	1	YB85005		6-Mar-06
Ice	175			1	YB85006		6-Mar-06
Ice	176		F	1	YB85007		6-Mar-06
Ice	177			1	YB85008		6-Mar-06
Ice	178		F	1	YB85009		6-Mar-06
Ice	179			1	YB85010		6-Mar-06
Ice	180		F	1	YB85011		6-Mar-06
Ice	181	212		32	YB85012	YB85043	6-Mar-06
Ice	213		F	1	YB85044		6-Mar-06
Ice	214	326		113	YB85045	YB85157	6-Mar-06
Ice	327	334		8	YB85158	YB85165	6-Mar-05
Ice	335	362		28	YB86186	YB86213	6-Mar-06
Ice	363	374		12	YB86878	YB86889	6-Mar-06
Ice	375	402		28	YB86214	YB86241	6-Mar-06
Ice	443	454		12	YB86282	YB86293	6-Mar-03
Ice	497	506		10	YB86336	YB86345	6-Mar-03
Ice	555	556		2	YB86394	YB86395	6-Mar-03
Ice	791	802		12	YB86994	YB87005	6-Mar-03
Ice	841	854		14	YB86564	YB86577	6-Mar-03
Ice	899	900		2	YB86622	YB86623	6-Mar-03
Ice	1042	1051		10	YB87133	YB87142	6-Mar-03
Ice	1072	1079		8	YB86638	YB86645	6-Mar-03
Ice	1080	1081	F	2	YB87693	YB87694	6-Mar-10
Ice	1082	1105	498	24	YB89308	YB89331	6-Mar-03

Table 2 Ice property claim information

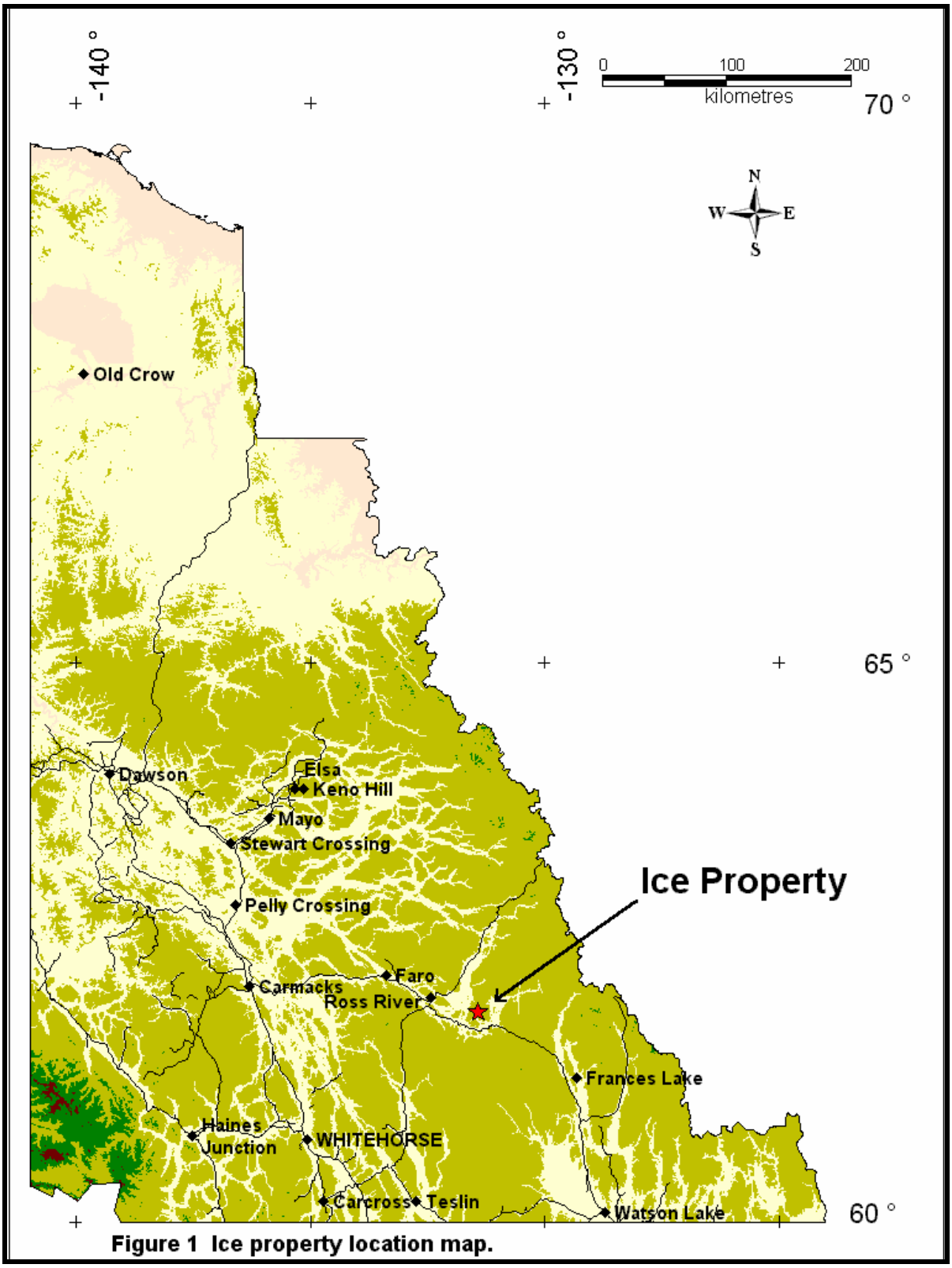

Figure 1 Ice property location map.

Figure 1 Ice claims location map

V. HISTORY

Expatriate Resources Ltd. staked the Ice property in 1996. Exploration in this region dates back to 1966, when the Faro lead-zinc deposit was discovered 100 kilometres to the northwest.

A. ICE

In 1996, sixteen claims were staked around the current Ice deposit area to cover a previously unstaked copper soil geochemistry anomaly. This anomaly was selected from a geochemical database, which documented 1973 exploration from a joint venture between Archer, Cathro and Associates Limited. An Expatriate Resources Ltd. geologist reported secondary copper mineralization within the copper anomaly area and subsequently, the property was increased to forty-eight claims. A drilling program commenced in 1996 and the remainder of the claims was staked later in the summer after favourable drill results were obtained.

The drill program resulted in the Ice deposit which was calculated by Becker (1998a) to have resource of 4 561 863 tonnes grading 1.48% copper with minor silver, gold, cobalt and zinc credits. This work was based on 10 584 metres of drilling in 121 diamond drill holes between 1996 and 1997. Thompson (1998) substantiated this work with an audit of the mineral resources. No production is recorded from the Ice deposit area.

In 2002, J. Klein re-evaluated the geophysical data on the Ice property from airborne geophysics conducted by Dighem (now Fugro) (Pritchard 1997). From this work, ground targets were generated (Moore and Klein, 2002). Ground exploration and ground geophysics of these targets is still incomplete.

VI. REGIONAL GEOLOGY

Tempelman-Kluit of the Geological Survey of Canada (1977; 1979) completed recent regional mapping of the Finlayson Lake area. Mortensen and Jilson (1985) and Mortensen (1992) have completed more recent geological studies. Generalized regional geology is described in the following paragraphs and shown on Figure 2.

Figure 2 Regional Tectonic Setting.

The Ice property is located within the Finlayson District, a 380 by 60 kilometre area comprised primarily of the Yukon-Tanana and Slide Mountain geologic terranes (Figure 2). 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 kilometres of dextral displacement during Late Cretaceous and/or Early Tertiary time (Tempelman-Kluit et al., 1976). The two terranes were not accreted to North America until Jurassic time; cobbles, from both units, are present in Late Triassic immature sediment that unconformably overlying Slide Mountain and North American stratigraphy (Tempelman-Kluit et al., 1976). Intrusive rock suites span from the Devonian to Tertiary time.

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 as well as 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 District, units belonging to the igneous suite are thrust to the northeast over the metasedimentary package and southwest 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).

A. YUKON–TANANA TERRANE

The Yukon-Tanana Terrane is comprised largely of Palaeozoic continental margin and/or arc stratigraphy deposited on a continental basement of uncertain origin (Mortensen, 1992). The Yukon-Tanana Terrane in the Finlayson District contains three major units collectively referred to as the Layered Metamorphic Sequence. The lower unit is comprised of garnet-mica schist with interbedded marble, calc-silicate and calcareous schist near the top. The middle unit is composed 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). Immediately south of Finlayson Lake, large isolated outcrops of marble and quartzite are dated as Early Pennsylvanian to Early Permian rocks (Templeman-Kluit, 1979). These form the uppermost unit of the Yukon-Tanana Terrane.

This sequence of units is generally correlative with a similar stratigraphic sequence in ancestral North America (Mortensen and Jilson, 1985). The lowermost sequence is correlated with the Lower Cambrian Atan Group and the middle carbonaceous assemblage is correlated with the offshelf, Silurian-Devonian Nasina quartzite assemblage. The felsic volcanic rocks are most similar to locally extensive Mississippian siliceous volcanic rocks in the North American stratigraphy. Local calcareous phyllite and massive greenstone near the top of the lower unit are lithologically similar to the Kechika Group and Lower Palaeozoic alkalic greenstone rocks, respectively.

Gneiss and augen gneiss invariably occur low in the Yukon-Tanana Terrane succession beneath either the lowermost calcareous unit or the middle carbonaceous unit. Mortensen and Jilson (1985) considered the gneisses to be metamorphosed Mid-Palaeozoic plutonic rocks. Conversely, Templeman-Kluit (1997) considers these gneisses to be at least in part recrystallization of earlier stratigraphy. Radiometric dating of the gneisses has consistently resulted in Late Devonian to Mississippian ages (Mortensen, 1992). The gneisses occur in structural culminations with diameters on the order of 10 kilometres and structural relief up to about 1 kilometre.

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

B. INTRUSIVE ACTIVITY

Intrusive activity within the Finlayson District 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 (Mortensen and Jilson, 1985).

C. STRUCTURE

Structurally, Yukon-Tanana Terrane schists and gneisses contain a pervasive, flat- to gentle-dipping foliation. Close examination of this fabric indicates that it commonly is a close-spaced crenulation cleavage. Large-scale folds related to this fabric can rarely be mapped in the field. In most cases bedding and earlier fabrics are transposed into near

parallelism with this dominant fabric. Later crenulation cleavages are present only locally. Some of the Cretaceous intrusions have a mild deformation fabric, others are massive and do not contain a foliation.

Thrust faults within the Finlayson District juxtapose lithologic sequences with similar deformation fabrics. Thrusting postdates the Late Palaeozoic Slide Mountain Terrane lithologies and predates the Cretaceous intrusive. Recent mapping also suggests, but does not definitively prove, the presence of major late extensional faults juxtaposing differing sequences (Templeman-Kluit, 1997). East to northeast trending, steep, normal faults disrupt all earlier deformation fabrics.

D. METAMORPHISM

Metamorphic grades range from lower greenschist facies to middle amphibolite facies. Contact hornfels around plutonic units occur locally. Metamorphism and deformation are tentatively correlated with transpressive suturing of these suspect terranes with ancestral North America. Suturing is restricted to the time interval of post-Triassic continuing into the Cretaceous. Whether deformation is continuous or sporadic has not been fully verified at present.

E. MINERALIZATION

The discovery of the Kudz Ze Kayah, GP4F, Fyre Lake, and Wolverine deposits within the Finlayson District in the last few years (Johnston and Mortensen, 1994) has re-focused exploration activities in the area. The deposits occur within metasedimentary and metavolcanic sequences of the Yukon-Tanana Terrane and are associated with felsic volcanic rocks present in the middle unit of that terrane. Grades and tonnages of these deposits are in Table 4 in section VII-A-4.

VII. REGIONAL MINERALIZATION

A. VOLCANIC MASSIVE SULFIDE DEPOSITS

Regional mineralization includes volcanic associated massive sulfide deposits (VMS). These deposits occur in terranes dominated by volcanic rocks. Volcanic or sedimentary strata host the deposit; all of which form integral parts of a volcanic complex. The deposits are comprised of two parts: massive sulfide that formed immediately below the seafloor, the second part is vein and disseminated ore that immediately underlies the massive sulfide ore. Deposits of the volcanic-associated massive sulfide type are important sources of copper, zinc, and lead; many deposits contain economically

recoverable gold and silver. Byproducts are commonly cadmium, tin, indium, bismuth, and selenium (Franklin, 1996, p. 158).

1. Cyprus Type Mineralization

Cyprus-type deposits are often located in an ocean-ridge or island setting with basalt and pillow lava as host rocks. These display hydrothermal alteration from the mineralizing fluids. The top of the deposit will commonly have and iron-rich sediment, then followed by massive sulfides, and a lower copper-rich stockwork zone. Underlying the mineralization sequence are more mafic rocks such as ultramafic cumulates, pyroxenite, dunite and harzburgite. Within the dunite and harzburgite additional deposits of podiform chromites may be found, these are Cu-Ni-Co-Fe sulfide deposits. Cyprus-type VMS deposits are relatively high in copper, and low in zinc and lead but can have moderate grades in gold and silver. Table 3 outlines the main Cyprus-type deposits, reserves and economic metals of the deposits.

Cyprus Mine	Reserves (M Tons)	Cu%	S%	Zn%	Pb%	Ag ppm	Au ppm	Source
Mavrovouni	15	4	47	0.5	-	39	0.3	Bear (1963)
Skouriotissa	6	2.3	48	0.06	-	-	-	Bear (1963)
Kalavasos	2.3	1.5	33	0.7	0.01	5.7	1.6	Bear (1963)
Limni	4	1.4	-	0.29	-	2.7	0.51	Bear (1963)

Table 3 Typical grades of Cyprus-type deposits in Cyprus, Greece.

3. Besshi-Type Deposits

Besshi-type VMS are deposited in a variety of settings, that include rifted continental margins, intracontinental rifts, back-arc basins and sediment-covered spreading ridges proximal to continental land masses, mid-ocean ridges and intra-plate back-arc basalt volcanic vents. The lithology is predominantly tholeiitic pillow lava. There is a lack of felsic volcanism and the alteration mineralogy lacks barite and anhydrite. Thick sequences of continentally derived clastic sediments, such as greywacke, argillite and siltstones, deposit rapidly. The deposit occurs proximal to the vent location and is stratabound. Besshi-type deposits are often viewed as a Cyprus-type deposit caught up in a rapid sedimentation process. Examples of this deposit type are: Besshi, Japan; Gossan Lead, United States; Windy Craggy, Canada; Matchless, Namibia; Tverfjell, Norway; Saladipura, India; Liwu, China; Kizil-Dere, Georgia; Rapu-Rapu, Philippines; Altin-Tepe, Romania. Median grades are 1.3 Mt of 1.43% Cu

commonly with significant zinc, silver, and gold credits. The massive Windy Craggy deposit reports 297 Mt with 1.4% Cu, 0.3% Zn, 4% Ag, and 0.2 g/t Au.

4. Kuroko-Type Deposits

Kuroko-type deposits are typically associated with highly differentiated volcanic sequences of basalt, andesite, dacite, and rhyolite. Mineralization is distinctly associated with rhyolite. The economic metals are Pb, Zn, Ag, Au, and lesser Cu. The ore is commonly massive and poorly bedded near the top of the deposit, and is dominated by Pb, Zn, Ba, and Cd, whereas the base of the deposit is copper-rich. This deposit type model originated from the Green Tuff Belt in Japan, where there are 27 different sulfide lenses in 7 different deposits. The deposits average grade is 1.63% Cu, 3.86% Zn, 0.92% Pb, 95.1 g/t Ag, and 0.9 g/t Au in the Green Tuff Belt. The average tonnage of these 7 deposits is 5.8 Mt. In the Finlayson Belt, three other Kuroko-type deposits have been discovered. These are Kudz Ze Kayah, Wolverine and GP4F. The resources are detailed in Table 4.

Finlayson District Resources

	Tonnes	Zinc	Lead	Copper	Silver	Gold
Kudz Ze Kayah [1,4] indicated	13,720,000	6.0%	1.61%	0.90%	139.2 g/t	1.38 g/t
Wolverine – main lens indicated [1]	4,941,000	13.00%	1.58%	1.43%	379.4 g/t	1.76 g/t
inferred [1]	498,000	13.61%	1.70%	1.36%	365.3 g/t	1.51 g/t
upper lens – inferred [2]	343,000	13.11%	1.85%	0.80%	354.2 g/t	1.39 g/t
GP4F [3] inferred	1,500,000	6.40%	3.10%	0.10%	90 g/t	2.00 g/t
Total Indicated Resource	18,661,000	7.85%	1.60%	1.04%	202.8 g/t	1.48 g/t
Total Inferred Resource	2,341,000	8.92%	2.62%	0.47%	187.3 g/t	1.81 g/t

[1] Resource estimates for Kudz Ze Kayah and main lens of Wolverine by Hatch Associates Ltd., November 2000.
[2] Inferred Resources for upper lens by Westmin Resources Ltd, 1998
[3] Inferred Resource for GP4F estimated by Cominco Ltd., 1998 Annual Report
[4] Kudz Ze Kayah & GP4F are owned by Teck Cominco Metals Ltd.

Table 4 Finlayson District Resources.

B. Mesothermal Gold Veins

This type of deposit occurs as simple to complex quartz-carbonate vein systems associated with brittle-ductile shear zones and folds in deformed and metamorphosed volcanic, sedimentary, and granitoid rocks. In these deposits, gold occurs in veins or as disseminations in the immediately adjacent altered wall rocks. Overall, gold is the significant economic commodity. The veins occur in structural environments characterized by low- to medium-grade metamorphic rocks and brittle-ductile rock behavior, this corresponds the intermediate depths within the crust, and by compressive tectonics (Robert, 1995, p.350). Minor occurrences of this deposit type have been noted in the district.

C. Intrusion Related Gold Deposits

This style of deposit is diverse in setting, there are three end members differentiated by tectonic environment. These are intra-continental orogenic collapse, intra-continental anorogenic magmatism and extension along a subduction-related continental margin. All of these environments have significant igneous activity, which is related to mantle underplating, high heat flow and source rocks that are relatively oxidized. Key features of this deposit type are: that they are localized by tectonic features, including volcanic structures in high-level systems; abundance of iron minerals other than sulfides such as magnetite or hematite; vein-breccia-replacement styles of mineralization; and ore element association Cu with Au and/or Ag. Minor elements include Co, U, Ba, F and rare earth elements. It is not expected that this deposit style is a predominant one in the Finlayson district, however previous exploration has noted several occurrences of intrusion related gold.

VIII. Property Geology

A. A. Ice Property Scale Geology

1. Introduction

In 1997, Expatriate performed reconnaissance mapping and prospecting across the entire property and detailed mapping in the immediate vicinity of the Ice Deposit. The Ice property is located 1 to 3 kilometres 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. Plint and Gordon (1997) state that whole rock geochemistry and depositional environments are consistent with a deep submarine basin in either a marginal or ocean basin setting. Based on lithologic similarities to other rock types in the region, Mortenson (1992) infers depositional ages to be Devonian to Triassic. Plint and Gordon (1992) collected two samples from Slide Mountain Terrane rocks slightly south and east of the Ice property; these yielded late Palaeozoic (Mississippian-Permian) fossil ages.

2. Geology in the Drill Area

Geology in the Ice deposit drill area was compiled at a scale of 1:2000 and is based on mapping of outcrops and drill access roads, logging of diamond drill holes and interpretation of ground magnetometre and electromagnetic response. The area is underlain by relatively unstained, 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 Pigage and described in Eaton and Pigage (1997). Plate 2 contains detailed drill geology mapping.

3. Lithology

Volcanic rocks in the drill area consist of massive basalt (MSBS), porphyritic pillow basalt (PHBS) and autobrecciated pillow basalt (BRBS). Interbedded with the basalts are black, grey, green and red ribbon chert (RBCH), massive green and red chert (MSCH), greywacke (SDST) and carbonaceous mudstone (CBMS). Figure 3 illustrates a stratigraphic column for the drill area.

4. 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 metres thick (Figure3). The rock is characteristically medium green with a pale pink to purple tinge. It is generally nonmagnetic and non- to slightly calcareous. Pillows ranging up to 1.5 metres in diameter are commonly observed in outcrops but are not readily visible in drill core. Red and green chert forms interstitial aggregates

between some pillows. Outcrops often exhibit autobrecciated textures and radial fractures within the pillows.

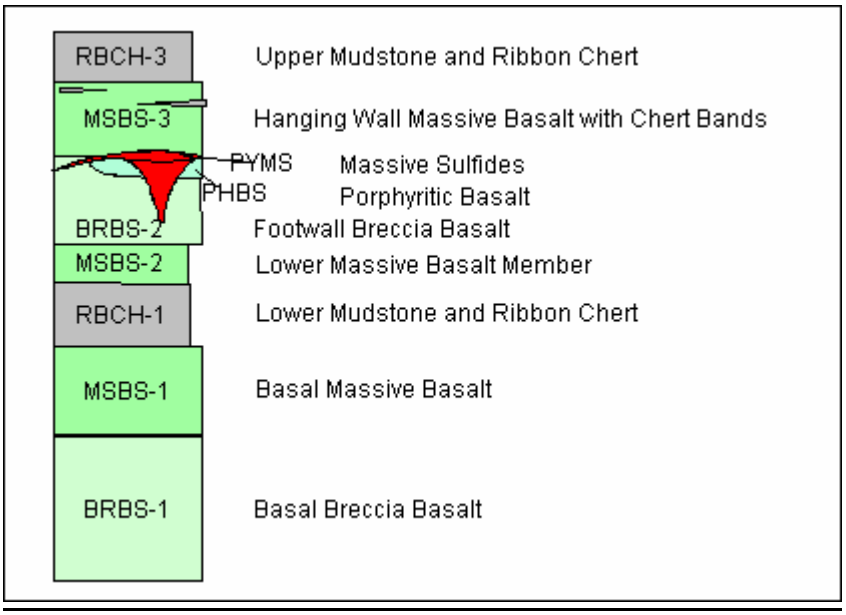

Figure 3 Stratigraphic column of Ice deposit area geology

5. Basal Massive Basalt ($MSBS_1$)

$BRBS_1$ is conformably overlain by green, medium- to coarse-grained, equigranular massive basalt ($MSBS_1$) (Figure 3), which ranges between 70 to 90 metres 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.

6. Lower Mudstone and Ribbon Chert ($RBCH_1$)

Conformably overlying $MSBS_1$ is a 50 to 70 metres thick sequence of interbedded carbonaceous mudstones and ribbon cherts (Figure 3). 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 micaceous sheen on fresh surfaces. They are typically coated with a patchy medium brown limonite on weathered surfaces.

7. Footwall Massive Basalt ($MSBS_2$)

$RBCH_1$ is conformably overlain by 30 to 40 metres of homogenous, medium-grained equigranular massive basalt ($MSBS_2$) (Figure 3). 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.

8. Footwall Breccia Basalt ($BRBS_2$)

Footwall breccia basalt ($BRBS_2$) is 65 to 90 metres thick and is lithologically very similar to $BRBS_1$. Stringer sulphide mineralization is common within $BRBS_2$ and in a few areas, a massive sulphide horizon (PYMS) lies between $BRBS_2$ and overlying $MSBS_3$. In Figure 3, the massive sulfide horizon is red in colour.

9. Porphyritic Basalt (PHBS)

An aphanitic, medium green to dark grey-green, noncalcareous porphyritic basalt (PHBS) usually overlies $BRBS_2$. PHBS has been drilled over the entire Ice deposit resource area and is a key rock type linked to the mineralization process. The massive sulphide horizon (PYMS) normally occurs between PHBS and overlying $MSBS_3$. Stockwork sulphides are locally developed within PHBS. In Figure 3, the PHBS is the rock type immediately adjacent to the massive sulfide horizon.

10. Hanging Wall Massive Basalt ($MSBS_3$)

Overlying PHBS, PYMS, or $BRBS_2$ is a medium grained, medium to dark green, equigranular, homogenous massive basalt ($MSBS_3$), which resembles the massive basalt units $MSBS_1$ and $MSBS_2$. Massive grey, red, or green cherts occur as thin local interbeds within $MSBS_3$ (Figure 3).

11. 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 metres thick and is lithologically similar to $RBCH_1$ (Figure 3).

12. Metamorphism

Relic primary mineralogy in the basalts consists dominantly of plagioclase laths with interstitial clinopyroxene. This primary mineralogy is 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.

13. Structure

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 (Plate 2). Structural analysis shows southeast-dipping beds with a mean bedding orientation of 050/49 SE. The greatest concentration of primary bedding measurements is at 040/38 SE.

The oldest structure in the Ice deposit drill area is four northwest trending faults, which have small displacements of 10 to 100's of metres (Plate 2). It is uncertain whether the faults are dominantly strike-slip or dip-slip. The youngest faults in the Ice deposit area are three steep, northeast-trending faults (Plate 2).

IX. ICE DEPOSIT DESCRIPTION

The Ice property host's copper±gold±silver±zinc±cobalt VMS mineralization. Primary copper minerals are found in massive sulphide horizons and stockwork zones as chalcopyrite with pyrite and occasional bornite. Secondary copper minerals occur above or peripheral to the primary mineralization and were formed either by in situ oxidation or precipitation following leaching and groundwater transport.

A total of 121 diamond drill holes (10,584 metres) have been completed on the Ice property, 87 of which were drilled in 1997. All but six of the drill holes were drilled in a 600 by 400 m area. The outlying drill holes tested soil geochemical anomalies. These holes failed to intersect significant mineralization and the anomalies were attributed to glacial or groundwater dispersion.

The best assay results were obtained near the centre of the drill area in a 350 m long, approximately 50 m wide zone consisting predominantly of primary massive sulphide mineralization. Copper intersections within this zone include: 5.20% over 20.56 m (drill hole IC96-34), 8.56% over 5.92 m (ID97-11), 3.57% over 28.55 m (ID97-13), 4.09% over 7.55 m (ID97-20), 4.31% over 19.75 m (ID97-36), 3.47% over 25.09 m (IC97-46), 3.20% over 28.51 m (IC97-57), 3.79% over 5.69 m (IC97-70) and 4.18% over 8.97 m (IC97-84). This high-grade core is surrounded by a broad halo containing thick

intersections of lower-grade mineralization. Copper grades in the halo typically range from 1.5% to 3% in massive sulphide, 0.5 to 1.2% in stockwork sulphide and 0.2 to 1.5% in secondary mineralization. The massive sulphide mineralization usually contains potentially significant gold (0.2 to 0.8 g/t), silver (2 to 20 g/t), cobalt (0.02 to 0.08%) and zinc (0.2 to 0.6%). Multi-element analyses indicate that no significant detrimental elements are present in the mineralization.

Diamond drilling at the Ice property has defined an indicated mineral resource of 4,561,863 tonnes grading 1.48% copper, including about 3.4 million tonnes of near-surface mineralization at the same grade. Mr. I.S. Thompson, P.Eng, audited the resource calculations of Derry, Michener, Booth & Wahl Consultants Ltd., his report concludes that the resources "have been correctly estimated and represented by Expatriate". The indicated resource is overlain by a significant amount of additional near surface oxide copper mineralization for which there is insufficient data to estimate a resource. Although existing drilling largely closes off the deposit, the Ice property is large and most of the favorable stratigraphy is untested.

X. 2002 FIELD PROGRAM

The program focused on re-assessment of the resource that was calculated by Becker (1998a) and Thompson (1998) as well as geologic aspects of the resource that was established by Eaton and Pigage in 1997.

Bradshaw G. and Tindle. J. were present on the property from July 1stth to 14th, 2002 and completed 28 person days of work. This work was supervised by Duncan, R. and this report primarily written by Moore, J. and Bradshaw, G.

The new calculated resource does not conform to NI 43101 guidelines. The estimation does not use categories stipulated in sections 1.3 and 1.4, and does not provide categories for the estimation. This resource is intended for in-house evaluation of the Ice deposit by Expatriate Resources Ltd.

XI. STATEMENT OF EXPENDITURES

I, Jill A. Moore, as agent for Expatriate Resources Limited, #701-475 Howe Street, Vancouver, B.C. do solemnly declare that re-evaluation of drill core from the Ice deposit was carried out on the Ice claim block intermittently between June 1st and July 14th 2002. The drill core is stored at the Ice camp located on the property.

ACCOMMODATION & MEALS	$1,429.18
Camp Expense	$128.46
Drafting, Printing & Reproduction	$425.00
Helicopter	$11,016.68
Communications	$159.86
Equipment Rentals	$575.00
Fuel	$120.88
Wages	$4,700.00
Material & Supplies	$976.66
Truck Rental	$1,731.49
Report	$1,000.00
TOTAL	$22263.21

I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the Province of British Columbia this 15_th day of July, 2003.

_____

Jill A. Moore
Project Geologist

XII. 2002 Field Program Results

A. Objectives

The objective of the 2002 field program was to determine the nature and continuity of the high-grade core of the deposit by examination of drill core. Particular emphasis was on mineralogy, such as bornite distribution. Bornite has a higher percentage of copper Mineralogically, and this is where the high-grade core of the deposit should be interpreted to be. Additionally, evaluation of structure was a logging objective. Previous authors relied heavily on structural constraints, such as faults, to interpret the geology and the deposit. However, Cyprus-type mineralization is often interpreted to not be structurally constrained.

B. Methodology

All drill holes that contained high copper grades were examined and the following information was recorded: hanging wall lithology, footwall lithology, thickness of massive sulphide interval (if present), abundance of bornite, abundance of chalcopyrite, and thickness and location of hematitic chert horizon (if present). Presence of significant faults, mineral zoning, oxidation and secondary copper mineralization were also noted.

C. Results

1. General Description and Morphology

The Ice deposit is a strata-bound replacement pyrite-chalcopyrite-bornite massive sulphide lens hosted in massive basalt. It has been defined over a strike length of 1000 metres and approximately 500 metres down-dip to the southeast. It is eroded on the northwest up-dip edge and is oxidized where it is located near the surface in the southwest. In this area, oxide minerals and not massive sulphide generate high copper grades. The average thickness of the sulphide sheet is 4.94 metres with a central core of 15 – 16 metres. The high grade core of the deposit, which contains bornite, is defined by 6 drill holes, appears to be oriented east-west, and extends for approximately 300 metres along strike and 80 metres down dip. It is located 22 metres below surface on the westernmost portion and 82 metres below surface on the easternmost portion, due to topography. That portion of the high-grade massive

sulphide that is closest to surface could be accessed by a shallow decline with an approximate length of 100 metres.

2. Geology

The massive sulphide body is hosted completely within green, fine-grained, massive meta-basalt, with the exception of narrow (5 cm to 2.7 m) red hematitic meta-chert horizons that occur at the upper and lower contacts. The hanging wall is typically massive and unaltered meta-basalt. The footwall is variably brecciated and altered but is thought to be the same lithology. Alteration generally consists of quartz and less commonly epidote amygdules surrounded by light brown fine-grained masses of cordierite(?) within brecciated meta-basalt. The most proximal alteration consists of chlorite within a brecciated quartz, pyrite and hematite stockwork. This intense stockwork zone is commonly separated from the overlying massive sulphide by up to 30 metres of massive, or auto-brecciated meta-basalt. This is puzzling and may reflect later deformation. The geological data is summarized in Table 5.

DDH	HW	From	To	TT (m)	FW	Bn	Cpy	Hm Chert	Comments
IC96-06	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	17.4 to 21.3 has Cu oxide on fractures
IC96-08	oxidized bslt w qtz + py	18.95	20.85	1.90	bx bslt w chl altn	0	0	none	azurite noted in hw and fw
IC96-13		47.00	56.80	7.28		0	2		zone not located in core - interval estimated from sections
IC96-16		0.00	0.00	0.00		0	0		no massive sulphide present
IC96-34	msv bslt	72.27	92.57	15.55	msv bslt	4	3	minor	excellent intersection
IC97-36	oxidized bx bslt	0.00	0.00	0.00	oxidized bslt	0	0	none	strongly oxidized
IC97-38		0.00	0.00	0.00		0	0		hole not studied
IC97-39	ferricrete	0.00	0.00	0.00	msv bslt	0	0	none	strong ep + hm altn w limonite
IC97-40	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	strongly oxidized
IC97-41	bx bslt	0.00	0.00	0.00	bx bslt	0	0	none	Cu oxides on fractures in bslt
IC97-46	boxes missing	31.77	35.66	3.89	white altd bslt	0	3	unknown	chalcocite replaces pyrite near hw ct
IC97-49	oxidized bslt bx	0.00	0.00	0.00	altd bx bslt	0	0	none	strongly oxidized
IC97-57	flt bx in bslt	12.70	20.80	8.10	white altd bslt	0	2	none	Cu oxides near top, ab chalcocite + covellite near base
IC97-64	qtz + sx rubble	22.00	22.30	0.30	qtz + py in altd bslt	0	0	none	chalcocote w green Cu oxides
IC97-70	msv bslt	33.42	37.10	3.68	altd bslt	1	2	hw- 2.4 m	stg altn in fw w possible flt - Cu oxides near top
IC97-82	bx bslt	12.75	16.50	3.75	altd bslt w qtz + py	0	0	none	minor Cu oxides, strong oxidation
IC97-84	large fault	21.95	26.65	4.70	white altd bslt	4	1	none	bornite throiughout interval
ID97-01	msv bslt	83.10	90.98	7.61	bx bslt	0	2	none	oxidized, green Cu at top, altn is very weak
ID97-03	msv bslt	94.10	97.35	3.05	altd bslt - amgd	0	1	hw- 5 cm, fw- 15 cm	good low grade massive sulphide
ID97-04	msv bslt	51.21	55.78	3.50	altd bslt - amgd w/i flt	0	1	hw- 10 cm	big fault at base
ID97-07	msv bslt w ep veins	77.02	78.18	1.14	altd bslt - amgd w ep	0	3	none	minor Cu oxides, qtz + py stgrs w/o hm
ID97-08	msv bslt	73.80	75.10	1.00	altd bslt	0	2	fw- 30 cm	brownish altd bslt in fw
ID97-11	altd bslt	88.60	93.88	4.10	altd bslt w flt	0	4	none	altn in hw, flt in fw
ID97-12		92.25	93.50	0.94		0	0		not studied - low grades
ID97-13	msv bslt	89.25	101.31	9.24	qtz + py bx	5	3	hw - 10 cm	cpy increases toward base - excellent bornite
ID97-14	msv bslt	107.85	114.10	4.86	strong altn in bslt	0	3	hw- 30 cm, mid- 50 cm	very strong fw altn
ID97-16	msv bslt	130.65	135.55	4.73	altd bslt	0	3	hw- 60 cm, fw- 80 cm	strg fw altn (brown)
ID97-18	msv bslt	0.00	0.00	0.00	py-hm stwk	0	0	none	sx lens poorly defined
ID97-19	msv bslt	93.87	96.25	2.22	altd bslt - amgd	0	1	hw- 5 cm, fw- 15 cm	good low grade massive sulphide
ID97-20	msv bslt	86.72	93.30	6.01	msv bslt - amgd	2	2	fw- 80 cm	bornite increases toward base
ID97-26	msv bslt	87.55	90.70	2.96	altd bslt	0	3	hw- 15 cm	yellow-brown fw altn
ID97-30	msv bslt - fault	30.00	39.65	7.06	flt bx in bslt	0	3	hw- 60 cm	strong brecciation - qtz + py
ID97-31	msv bslt	45.60	46.33	0.56	flt in altd bslt	0	1	none	Cu oxides at base

Table 5 Drill Log Summary

3. Structure

Faults are common in drill core as evidenced by gouge zones up to several metres in thickness. However, it is unclear from the available evidence whether any of these faults cut or otherwise control the morphology of the massive sulphide deposit. There is certainly good evidence for several northeast trending faults (e.g. the baseline fault), but it is doubtful that these faults displace the massive sulphide as shown in previous work (Becker, 1998a). The position of the sulphide horizon can be easily explained by folding or warping of the stratigraphy in most cases. Even on section 11250N, the apparent displacement of the massive sulphide could be due to folding of the stratigraphy and discontinuity of the sulphide horizon. More drill holes would be necessary to completely assess the effect of structure on the continuity of mineralization.

4. Resource Calculation

A sectional resource was calculated using the computer program Discover in Mapinfo. The position of the massive sulphide horizon on 9, 50 metre window, cross sections was interpreted from available drill core data, and length weighted averages were calculated for copper over each intersection (gold was not considered because assays were not available from all of the sulphide intersections). Copper grades were then interpolated between drill holes on each section using an inverse distance weighted algorithm with a 1 metre grid block size. A 75 metre by 25 metre search ellipse oriented at 120 degrees was used to search for drill hole data and the results were clipped to the interpreted sulphide lens shape. A calculated global average specific gravity of 4.00 was used for the density of the massive sulphide.

5. Results

A sectional resource of 1 Million tonnes @ 4.32% Cu of sulphide material was defined over a strike length of 450 metres and down – dip extent of 220 metres (Table 6). Average thickness is 4.94 metres with a thicker central core of 15 – 16 metres. Assuming a mining thickness of 3 metres, the resource would be diminished to approximately 850,000 tonnes @ 4.29% Cu.

Section	Tonnes	Cu Grade (%)
11100N	7494	4.99
11150N	24038	6.14
11200N	99396	5.13
11250N	139543	4.05
11250N	7072	7.42
11300N	340939	3.65
11350N	201597	4.23
11400N	146343	5.71
11450N	13536	2.6
11500N	20828	2.18
Total	1000786	4.32

Table 6 Large Lens Polygons Mineralization.

XIII. STATEMENT OF QUALIFICATIONS

I, J. A. Moore, of 39147-3695 W. 10th Ave. Vancouver, V6R 4P1, in the Province of British Columbia, Canada, do hereby certify:

- I am a graduate of Prescott College in Prescott, Arizona, U.S.A, with a B. A. in Environmental Geology (1996). I completed a postgraduate degree at Rhodes University in Grahamstown, South Africa. I was admitted to the degree of M. Sc. in Mineral Exploration in 2002.

- Since 1991, I have been involved in the exploration and exploitation of precious metals and diamonds in British Columbia, NWT, Central America, the eastern shields of South America, and West Africa.

- The information, conclusions, and recommendation in this report are based on collaboration of other professional colleagues involved with various aspects of exploration on the property and in review of the literature stated in the bibliography. I have prepared this report on behalf of Expatriate Resources Ltd.

- This report may be used for the development of the property, provided that, no portion will be used out of context in such a manner as to convey meanings different from that set out in the whole.

- I am unaware of any material fact or material change with respect to the technical matter of this report that might cause the technical report to be inaccurate or misleading.

- I am a Geologist in the employ of Expatriate Resources Limited with offices at #701-475 Howe Street, Vancouver, British Columbia.

- I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated _____ Signed_____

J. A. Moore, M.Sc.

I, Robert A. Duncan of #301 1562 West 5th Avenue, Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employ of Expatriate Resources Limited with offices at #701-475 Howe Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining companies in North West Territories, Nunavut, Manitoba, Saskatchewan, British Columbia, Yukon Territory, and the United States of America, for twelve years.

3. THAT I am a graduate of the University of British Columbia and hold a Honours Bachelor of Science in Geology (1996) and a Master of Science in Geology (1999).

4. THAT this report is based upon work which I supervised between July 1st to 14th th, 2002.

5. THAT I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated _____ Signed_____
Robert A. Duncan, M.Sc.

I, Geoffrey Bradshaw of 3509 West 42nd Avenue, Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a consultant geologist and was employed by Expatriate Resources Limited between July and August, 2002. Expatriate's office is located at #701-475 Howe Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining and exploration companies in B.C., Yukon, Chile, and Argentina.

4. THAT I am a graduate of the University of British Columbia and hold a Honours Bachelor of Science in Geology (1996) and a Master of Science in Geology (2003).

4. THAT this report is based upon field work which I completed between July 1st to 14th th, 2002.

5. THAT I have no direct interest in the property described herein, nor do I expect to receive any interest.

Dated _____ Signed_____

Geoff Bradshaw, M.Sc.

XIV. REFERENCES

Becker, T.C., 1997, Assessment Report describing Geological Mapping, Prospecting, Soil Geochemistry and Airborne Geophysical Surveys on the Ice Property, December 1997: Internal Report for Expatriate Resources Ltd., p.1-20.

Becker, T. C., 1998, Assessment Report describing Geological Mapping, Prospecting, Soil Geochemistry, and Diamond Drilling on the Ice Property, May, 1998: Internal Report for Expatriate Resources Ltd. p, 1-39.

Becker, T.C., 1998a, Report Describing Mineral Resource Calculations at Ice Property, May 1998: Internal Report for Expatriate Resources Ltd., p. 1-11.

Burget, A. 1997. Assessment Report describing Geochemical, geophysical and claim Surveys on the Power Play Property January, 1997: Internal Report for Expatriate Resources Ltd. p. 1-24.

Eaton, W.D. and Pigage L.C., 1997, Assessment Report Describing 1996 Geological Mapping, Prospecting, Soil Geochemistry, Geophysical Surveys and Diamond Drilling on the Ice Property, May 1997: Internal Report for Expatriate Resources Ltd., p. 1-34.

Franklin, J.M., 1996, Volcanic-associated massive sulphide base metals: *in* O.R. Eckstrand, W.D. Sinclair and R.I. Thorpe (eds.), Geology of Canadian Mineral Types, Geological Survey of Canada, Geology of Canada, No. 8, p.158-183.

Galley, A.G. and Koski, R.A., 1997, Setting and characteristics of ophiolite-hosted volcanogenic massive sulphide deposits: *in* Barrie, C.T. and Hannington, M.D. (eds), Volcanic-Associated Massive Sulphide Deposits: Process and Examples in Modern and Ancient Settings, GAL-MMD-SEG p.253-280.

Johnston, S.T. and Mortensen, J.K., 1994, Regional setting of porphyry Cu-Mo deposits, volcanogenic massive sulphide deposits, and mesothermal gold deposits in the Yukon-Tanana Terrane, Yukon; Yukon Metallogeny: Recent Developments, Canadian-Yukon Economic Development Agreement, p.30-34.

Moore, J.A. and Klein, J. 2002, 2002 Geophysical Report For the Ice and Assist Claims in the Watson Lake Mining District Yukon Territory, Canada. Assessment report dated June 18th, 2002.

Mortensen, J.K. and Jilson, G.A., 1985, Evolution of the Yukon-Tanana Terrane: evidence from southeastern Yukon Territory: Geology, v.13, p.806-810.

Mortensen, J.K., 1992, Pre-Mid-Mesozoic Tectonic Evolution of the Yukon-Tanana Terrane, Yukon and Alaska: Tectonics, Vol.11, No.4, p.836-853.

Plint, H.E. and Gordon, T.M., 1997, The Slide Mountain Terrane and the structural evolution of the Finlayson Lake Fault Zone, southeastern Yukon: Canadian Journal of Earth Sciences, v.34, p.105-126.

Pritchard, R. A., 1997, Dighem^{V} Survey for Expatriate Resources Ltd., Finlayson Lake Area, Yukon flown October 28 to 31, 1996. Dighem, A Division of CGG Canada Ltd.: Internal Report for Expatriate Resources Ltd., p. 1-200.

Robert, F., 1995, Quartz-Carbonate Vein Gold: *in* Eckstrand, O.R. Sinclair, W. D., Thorpe, R.I. (eds.), Geology of Canadian Mineral Deposit Types. Ottawa, Canada, CCG Publishing, p. 1-640.

Stroshein, R.W. 1981, Assessment Report for Reno claims, Pelly River Area, Yukon for Hudson Bay Exploration and Development Company Limited, AR 090835.

Templeman-Kluit, D.J., Gordey, S.P. and Read, B.C., 1976, Stratigraphic and structural studies in the Pelly Mountains, Yukon Territory: Geological Survey of Canada Paper 76-1A, p.97-106.

Templeman-Kluit, D.J., 1977, Quiet Lake (105F) and Finlayson Lake (105G) map areas: Geological Survey of Canada, Open File 486.

Templeman-Kluit, D.J., 1979, Transported Cataclasite, Ophiolite and Granodiorite in Yukon: Evidence of Arc-Continent Collision: Geological Survey of Canada, Paper 79-14, 27 pages.

Thompson, I.S., 1998, Audit of Mineral Resources of Ice Deposit, Yukon for Expatriate Resources Ltd.: Internal Report for Expatriate Resources Ltd., p. 1-7.

Wengzynowski, W. A., 1996, Assessment Report Describing Prospecting and Geochemical Surveys on the Play 1-64 Property, April, 1996: Internal Report for Expatriate Resources Ltd., p. 1-20.

Wengzynowski, W. A., 1998, Descriptions of 1998 Prospecting at Ice Property and 1998 Relogging of Core from Redline and League Properties in the Finlayson Lake Area, Yukon Territory, March 1999: Internal Report for Expatriate Resources Ltd., p. 1-8.

Woolham, R. W., 1996, Report on a Combined Helicopter-Borne Electromagnetic and Magnetic Survey, by Aerodat Inc: Internal Report for Expatriate Resources Ltd., p. 1-200.

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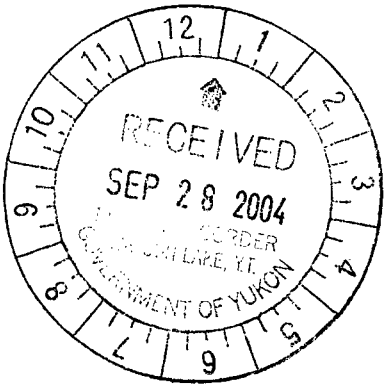

Friday, September 24, 2004

RE: ICE Mineral Claims 105G/14

Dear Patti,

Please find enclosed two copies of drill logs that were produced from the digital compilation and field work during the re-interpretation of the drill core data from Expatriate Resources Ltd's ("EXPATRIATE") Ice Deposit, Yukon. Note that it was 250 pages of paper to print off all the assay results, therefore it was decided to submit a digital copy of the Microsoft Excel spreadsheet on CD-ROM format.

If you have any questions or require further information, please feel free to contact myself using a direct phone line at +1 (604) 682-5474 extension 225.

Respectfully Submitted,
EXPATRIATE RESOURCES LTD.

Jason Dunning, M.Sc., P.Geo.
Vice President Exploration

x.c.: Files

EXPATRIATE RESOURCES LTD.

ICE Property

1996 Drill Logs

Reprinted: Spring 2004

094385 V.2

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hole_id	north	east	elev	length	st_dip	st_az	logby	project	property	mapref	claim	region	datestrt	datefin	assayer
IC96-01	6862488	376627	1256	182	-50	305	G. Bell	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	06/07/1996	11/07/1996	3
IC96-02	6862687	376788	1290	116.16	-50	288	Bell/McDougall	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	12/07/1996	14/07/1996	39
IC96-03	6862636	376807	1278	152.4	-50	316	G. McDougall	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	27/07/1996	01/08/1996	90
IC96-04	6862638	376723	1283	148.29	-50	308	G. Bell	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	01/08/1996	06/08/1996	9
IC96-05	6862476	376690	1246	66.45	-50	306	G. Bell	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	10/08/1996	14/08/1996	4
IC96-06	6862596	376709	1276	93	-50	304	G. Bell	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	15/08/1996	17/08/1996	29
IC96-07	6862557	376750	1262	53.34	-50	320	G. Bell	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	19/08/1996	21/08/1996	0
IC96-08	6862646	376632	1286	74.37	-90	0	G. Bell	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	22/08/1996	25/08/1996	9
IC96-09	6862646	376632	1286	74.37	-50	128	G. Bell	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	26/08/1996	30/08/1996	12
IC96-10	6862395	375995	1240	84	-51	165	G. Bell	1642	ICE	NTS 105G/13,14	Ice 17	Watson Lake Mining District	31/08/1996	06/09/1996	0
IC96-11	6862388	376311	1238	78	-51	300	G. Bell	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	07/09/1996	10/09/1996	0
IC96-12	6862675	376593	1298	70.41	-50	306	G. Bell	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	11/09/1996	13/09/1996	0
IC96-13	6862747	376830	1301	99	-48	315	G. Bell	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	12/09/1996	16/09/1996	10
IC96-14	6862618	376671	1275	57	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	14/09/1996	17/09/1996	2
IC96-15	6862719	376725	1291	90	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	17/09/1996	21/09/1996	0
IC96-16	6862648	376630	1286	54	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	18/09/1996	20/09/1996	3
IC96-17	6862564	376577	1272	65	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	21/09/1996	23/09/1996	0
IC96-18	6862726	376689	1296	77.42	-50	305	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	22/09/1996	25/09/1996	2
IC96-19	6862328	376391	1222	59	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	24/09/1996	26/09/1996	0
IC96-20	6862750	376654	1313	64	-50	310	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	26/09/1996	30/09/1996	0
IC96-21	6862507	376590	1259	46.18	-50	312	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	27/09/1996	28/09/1996	0
IC96-22	6862597	376533	1285	45	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	29/09/1996	01/10/1996	0
IC96-23	6862781	376616	1330	105	-50	307	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	01/10/1996	06/10/1996	0
IC96-24	6862637	376484	1316	78.03	-50	305	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	02/10/1996	06/10/1996	0
IC96-25	6862534	376533	1265	52	-90	0	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	06/10/1996	08/10/1996	0
IC96-26	6862810	376580	1351	56.39	-50	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	08/10/1996	10/10/1996	0
IC96-27	6862534	376533	1265	46.33	-50	130	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	09/10/1996	10/10/1996	12
IC96-28	6862862	376846	1322	85.04	-50	303	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	11/10/1996	15/10/1996	0
IC96-29	6862775	376789	1309	66	-50	303	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	12/10/1996	15/10/1996	19
IC96-30	6862814	376908	1298	82.3	-49	315	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	16/10/1996	18/10/1996	3
IC96-31	6862806	376750	1323	62	-49	308	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	17/10/1996	20/10/1996	0
IC96-32	6862920	376767	1362	55.47	-50	296	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	19/10/1996	22/10/1996	7
IC96-33	6862835	376710	1337	56.08	-50	310	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	21/10/1996	24/10/1996	0
IC96-34	6862715	376870	1288	115	-50	305	A. Burgert	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	23/10/1996	26/10/1996	15
IC97-35	6862633	376650	1281	46	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	20/07/1996	22/07/1996	9
IC97-36	6862648	376630	1286	42	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	22/07/1996	24/07/1996	5
IC97-37	6862678	376590	1300	40	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	24/07/1996	25/07/1996	0
IC97-38	6862662	376611	1291	35	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	26/07/1996	27/07/1996	11
IC97-39	6862619	376670	1275	32	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	27/07/1996	28/07/1996	0
IC97-40	6862603	376690	1278	35.36	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	28/07/1996	29/07/1996	7
IC97-41	6862593	376713	1275	36	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	29/07/1996	29/07/1996	9
IC97-42	6862574	376732	1267	15.24	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	30/07/1996	30/07/1996	0
IC97-43	6862521	376471	1265	38	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	31/07/1996	01/08/1996	0
IC97-44	6862509	375921	1267	165	-50	270	Kosta	1642	ICE	NTS 105G/13,14		Watson Lake Mining District	09/08/1996	12/08/1996	0

hole_id	north	east	elev	length	st_dip	st_az	logby	project	property	mapref	claim	region	datestrt	datefin	assayer
IC97-45	6862509	375921	1267	111	-50	305	Kosta	1642	ICE	NTS 105G/13,14		Watson Lake Mining District	12/08/1996	14/08/1996	0
IC97-46	6862674	376680	1289	47	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	23/08/1996	24/08/1996	20
IC97-47	6862594	376621	1275	34	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	24/08/1996	25/08/1996	13
IC97-48	6862608	376601	1279	32.31	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	25/08/1996	26/08/1996	15
IC97-49	6862688	376660	1287	29.26	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	27/08/1996	28/08/1996	7
IC97-50	6862623	376580	1284	34.14	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	28/08/1996	29/08/1996	5
IC97-51	6862583	376551	1279	30	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	29/08/1996	30/08/1996	13
IC97-52	6862568	376571	1274	34.13	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	30/08/1996	30/08/1996	15
IC97-53	6862561	376581	1271	37.19	-70	115	Kosta	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	31/08/1996	31/08/1996	5
IC97-54	6862549	376513	1269	34.13	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	01/09/1996	01/09/1996	0
IC97-55	6862714	376710	1289	36	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	02/09/1996	02/09/1996	15
IC97-56	6862784	376700	1319	77.11	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	03/09/1996	05/09/1996	25
IC97-57	6862699	376730	1292	42	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	03/09/1996	05/09/1996	2
IC97-58	6862799	376680	1324	40	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	06/09/1996	07/09/1996	9
IC97-59	6862814	376660	1333	39.32	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	07/09/1996	08/09/1996	0
IC97-60	6862770	376625	1325	54	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	08/09/1996	10/09/1996	0
IC97-61	6862628	376737	1281	41	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	10/09/1996	11/09/1996	0
IC97-62	6862794	376770	1318	80.47	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	10/09/1996	12/09/1996	0
IC97-63	6862644	376721	1282	29.11	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	11/09/1996	11/09/1996	0
IC97-64	6862659	376700	1281	37	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	12/09/1996	13/09/1996	7
IC97-65	6862809	376750	1323	33.22	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	12/09/1996	13/09/1996	0
IC97-66	6862549	376681	1263	17.37	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	13/09/1996	14/09/1996	0
IC97-67	6862834	376800	1325	45	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	14/09/1996	15/09/1996	0
IC97-68	6862563	376661	1264	18	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	14/09/1996	15/09/1996	0
IC97-69	6862538	376611	1266	31.39	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	15/09/1996	16/09/1996	0
IC97-70	6862780	376789	1310	49.53	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	15/09/1996	16/09/1996	5
IC97-71	6862499	376582	1258	26.21	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	16/09/1996	16/09/1996	0
IC97-72	6862483	376601	1254	27.43	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	17/09/1996	17/09/1996	0
IC97-73	6862823	376732	1329	33	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	17/09/1996	17/09/1996	7
IC97-74	6862769	376720	1312	50	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	18/09/1996	19/09/1996	0
IC97-75	6862523	376631	1261	31.09	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	18/09/1996	18/09/1996	0
IC97-76	6862509	376651	1258	31.09	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 10	Watson Lake Mining District	19/09/1996	19/09/1996	0
IC97-77	6862754	376740	1305	45	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	19/09/1996	20/09/1996	0
IC97-78	6862578	376641	1269	31.09	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	20/09/1996	20/09/1996	0
IC97-79	6862758	376650	1316	50	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	20/09/1996	21/09/1996	0
IC97-80	6862519	376553	1254	27	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 9	Watson Lake Mining District	21/09/1996	21/09/1996	0
IC97-81	6862718	376620	1309	46	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	21/09/1996	22/09/1996	0
IC97-82	6862725	376695	1295	46.33	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	22/09/1996	23/09/1996	0
IC97-83	6862703	376639	1300	47	-90	0	Sefika	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	23/09/1996	24/09/1996	0
IC97-84	6862739	376760	1297	40.23	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	23/09/1996	24/09/1996	10
IC97-85	6862735	376681	1298	43.28	-90	0	Kosta	1642	ICE	NTS 105G/13,14	Ice 11	Watson Lake Mining District	24/09/1996	25/09/1996	0

Project: 1642 **Hole Number: IC96-01**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	7.62	CSDH *casing*				
7.62	14.10	BRBS *breccia basalt*	7.62	9.14	N110802	1.52
			9.14	10.67	N110803	1.53
			10.67	12.80	N110804	2.13
			12.80	14.10	N110805	1.30
14.10	18.59	MSBS *massive basalt*	14.10	15.54	N110806	1.44
			15.54	16.76	N110807	1.22
			16.76	18.59	N110808	1.83
18.59	23.50	BRBS *breccia basalt*	18.59	19.90	N110809	1.31
			19.90	21.34	N110810	1.44
			21.34	23.50	N110811	2.16
23.50	24.75	SDST *sandstone with basalt*	23.50	24.75	N110812	1.25
24.75	29.90	MSCH *massive grey chert*	24.75	26.67	N110813	1.92
			26.67	28.18	N110814	1.51
			28.18	29.90	N110815	1.72
29.90	33.00	CBMS *dark grey mudstone*	29.90	31.40	N110816	1.50
			31.40	33.00	N110817	1.60
33.00	42.06	RBCH *grey ribbon bedded chert*	33.00	34.44	N110818	1.44
			34.44	36.58	N110819	2.14
			36.58	38.05	N110820	1.47
			38.05	39.62	N110821	1.57
			39.62	40.50	N110822	0.88
			40.50	42.06	N110823	1.56
42.06	55.10	RBCH *grey ribbon chert*	42.06	43.40	N110824	1.34
			43.40	45.11	N111075	1.71
			45.11	47.15	N111076	2.04
55.10	58.37	SDST *grey sandstone*				
58.37	65.95	RBCH *grey ribbon chert*	65.23	65.95	N110898	0.72
65.95	74.75	RBCH *grey and green ribbon chert*	65.95	67.36	N110899	1.41
			67.36	69.49	N110900	2.13
			69.49	71.07	N110901	1.58
			71.07	72.54	N110902	1.47
74.75	75.25	SDST *grey sandstone*				
75.25	86.11	RBCH *grey ribbon chert*	84.40	85.34	N110903	0.94

From	To	Rocktype & Description	S_from	S_to	Sample	Width
86.11	**92.04**	**RBCH**				
grey and green ribbon chert						
92.04	**95.60**	**MSBS**				
amygdaloidal basalt						
95.60	**167.20**	**MSBS**				
massive basalt						
167.20	**168.90**	**MSBS**				
massive basalt						
168.90	**181.66**	**MSBS**				
massive basalt						
181.66	**181.66**	**EOH**				

Project: 1642			Hole Number: IC96-02			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	4.30	LCDH				
missing core						
4.30	14.82	MSBS	4.30	5.50	N110825	1.20
massive basalt			5.50	6.70	N110826	1.20
			6.70	7.92	N110827	1.22
			7.92	9.45	N110828	1.53
			9.45	10.97	N110829	1.52
			10.97	12.80	N110830	1.83
			12.80	14.82	N110831	2.02
14.82	15.60	GGBS	14.82	15.60	N110832	0.78
clay gouge basalt						
15.60	19.00	FBBS	15.60	17.07	N110833	1.47
fault breccia basalt			17.07	19.00	N110834	1.93
19.00	24.99	GGBS	19.00	20.73	N110835	1.73
clay gouge basalt			20.73	21.89	N110836	1.16
			21.89	23.32	N110837	1.43
			23.32	24.99	N110838	1.67
24.99	28.75	FBBS	24.99	26.76	N110839	1.77
fault breccia basalt			26.76	28.75	N110840	1.99
28.75	31.70	BRBS	28.75	30.17	N110841	1.42
breccia basalt			30.17	31.70	N110842	1.53
31.70	37.40	GGBS	31.70	32.92	N110843	1.22
clay gouge basalt			32.92	34.44	N110844	1.52
			34.44	37.40	N110845	2.96
37.40	43.59	FBBS	37.40	39.01	N110846	1.61
fault breccia basalt			39.01	40.54	N110847	1.53
			40.54	42.06	N110848	1.52
			42.06	43.59	N110849	1.53
43.59	45.55	FBBS	43.59	45.55	N110850	1.96
sulphides in fault breccia						
45.55	46.00	FBBS				
			45.55	46.63	N110885	0.00
fault breccia basalt						
46.00	49.35	GGBS	46.63	48.16	N110886	1.53
clay gouge basalt			48.16	49.35	N110887	1.19
49.35	56.50	FBBS	49.35	50.57	N110888	1.22
ult breccia basalt			50.57	53.08	N110889	2.51
			53.08	54.55	N110890	1.47

Project: 1642 **Hole Number: IC96-02**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			54.55	56.62	N110891	0.00
56.50	67.97	MSBS	56.62	58.24	N110892	1.62
		massive basalt	58.24	60.20	N110893	1.96
			60.20	61.82	N110894	1.62
			61.82	63.37	N110895	1.55
			63.37	65.07	N110896	1.70
			65.07	66.60	N110897	1.53
			66.60	67.97	N111101	1.37
67.97	71.80	FBBS	67.97	69.49	N111102	1.52
		fault breccia basalt	69.49	71.02	N111103	1.53
71.80	74.14	MSBS				
		massive basalt				
74.14	75.30	FBBS				
		fault breccia basalt				
75.30	78.08	BRBS	75.30	76.81	N111104	1.51
		breccia basalt	76.81	78.08	N111105	1.27
78.08	80.77	BRBS	78.08	79.55	N111106	1.47
		breccia basalt with pyrite	79.55	80.77	N111107	1.22
80.77	85.23	BRBS	80.77	82.60	N111108	1.83
		breccia basalt				
85.23	116.16	MSBS				
		massive basalt				
116.16	116.16	EOH				

Project: 1642 **Hole Number: IC96-03**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	3.66	MSBS	1.83	3.28	N110935	1.45
massive basalt			3.28	3.66	N110936	0.38
3.66	4.95	HECH	3.66	4.95	N110937	1.29
hematitic chert						
4.95	11.25	MSBS	4.95	6.52	N110938	1.57
massive basalt			6.52	8.00	N110939	1.48
			8.00	9.75	N110940	1.75
			9.75	10.95	N110941	1.20
			10.95	11.12	N110942	0.17
			11.12	12.80	N110943	0.00
11.25	22.42	MSBS	12.80	14.33	N110944	1.53
massive basalt			14.33	16.50	N110945	2.17
			16.50	17.07	N110946	0.57
			17.07	18.90	N110947	1.83
			18.90	20.65	N110948	1.75
			20.65	22.42	N110949	1.77
22.42	23.52	FBBS	22.42	23.52	N110950	1.10
sheared basalt						
23.52	47.30	MSBS	23.52	24.99	N111001	1.47
massive basalt			24.99	26.37	N111002	1.38
			26.37	27.37	N111003	1.00
			27.48	29.05	N111004	1.57
			29.05	30.48	N111005	1.43
			30.48	32.00	N111006	1.52
			32.00	32.18	N111007	0.18
			32.18	34.14	N111008	1.96
			34.14	36.00	N111009	1.86
			36.00	37.95	N111010	1.95
			37.95	38.27	N111011	0.32
			38.27	40.23	N111012	1.96
			40.23	42.06	N111013	1.83
			42.06	42.48	N111014	0.42
			42.48	44.08	N111015	1.60
			44.08	45.72	N111016	1.64
			45.72	47.30	N111017	1.58
47.30	58.22	PHBS	47.43	47.92	N111018	0.49
porphyritic breccia basalt			47.92	49.53	N111019	1.61
			49.53	51.36	N111020	1.83

Project: 1642			Hole Number: IC96-03			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			51.36	53.11	N111021	1.75
			53.11	54.71	N111022	1.60
			54.71	56.39	N111023	1.68
			56.39	58.22	N111024	1.83
58.22	**60.35**	**PHBS**	58.22	60.35	N111025	2.13
epidote altered basalt						
60.35	**62.71**	**SSSG**	60.35	61.57	N111026	1.22
stringer sulpides in breccia basalt			61.57	62.71	N111027	1.14
62.71	**63.20**	**GGSG**	62.71	63.20	N111028	0.49
gouged stringer sulphides						
63.20	**70.20**	**BRBS**	63.20	64.77	N111029	1.57
hematitic breccia basalt			64.77	66.65	N111030	1.88
			66.65	67.00	N111031	0.35
			67.00	67.80	N111032	0.80
			67.80	68.88	N111033	1.08
			68.88	70.20	N111034	1.32
70.20	**74.37**	**BRBS**	70.20	71.60	N111035	1.40
breccia basalt with stringer sulphides			71.60	72.69	N111036	1.09
			72.69	74.37	N111037	1.68
74.37	**85.63**	**BRBS**	74.37	75.74	N111038	1.37
breccia basalt			75.74	77.05	N111039	1.31
			77.05	78.38	N111040	1.33
			78.38	78.54	N111041	0.16
			78.54	80.47	N111042	1.93
			80.47	82.30	N111043	1.83
			82.30	84.12	N111044	1.82
			84.12	85.63	N111045	1.51
85.63	**88.70**	**FBBS**	85.63	86.41	N111046	0.78
basalt fault breccia			86.41	87.55	N111047	1.14
			87.55	88.70	N111048	1.15
88.70	**105.16**	**BRBS**	88.70	90.75	N111049	2.05
hematitic breccia basalt			90.75	92.81	N111050	2.06
			92.81	94.86	N111051	2.05
			94.86	96.91	N111052	2.05
			96.91	98.97	N111053	2.06
			98.97	101.04	N111054	2.07
			101.04	103.00	N111055	1.96
			103.00	105.16	N111056	2.16
105.16	**117.71**	**BRBS**	105.16	106.23	N111057	1.07
breccia basalt			106.23	108.12	N111058	1.89

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			108.12	109.26	N111059	1.14
			109.26	110.40	N111060	1.14
			110.40	111.90	N111061	1.50
			111.90	113.39	N111062	1.49
			113.39	115.00	N111063	1.61
			115.00	116.43	N111064	1.43
			116.43	117.01	N111065	0.58
			117.01	117.71	N111066	0.70
117.71	**122.85**	**SSSG**	117.71	118.81	N111067	1.10
breccia basalt with stringers			118.81	120.40	N111068	1.59
			120.40	121.92	N111069	1.52
			121.92	122.85	N111070	0.93
122.85	**135.96**	**BRBS**	122.85	124.84	N111071	1.99
breccia basalt			124.84	126.82	N111072	1.98
			126.82	128.63	N111073	1.81
			128.63	130.76	N111074	2.13
135.96	**142.95**	**MSBS**				
massive basalt						
142.95	**152.40**	**BRBS**				
breccia basalt						
152.40	**152.40**	**EOH**				

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From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	15.48	BRBS	1.83	2.43	N111078	0.60
		epidote altered breccia basalt	2.43	3.35	N111079	0.92
			3.35	5.00	N111080	1.65
			5.00	6.40	N111081	1.40
			6.40	7.62	N111082	1.22
			7.62	9.42	N111083	1.80
			9.42	10.97	N111084	1.55
			10.97	12.65	N111085	1.68
			12.65	14.02	N111086	1.37
			14.02	15.48	N111087	1.46
15.48	18.90	BRBS	15.48	17.07	N111088	1.59
		breccia basalt with malachite annd cuprite	17.07	17.98	N111089	0.91
			17.98	18.90	N111090	0.92
18.90	22.56	BRBS	18.90	20.27	N111091	1.37
		breccia basalt	20.27	21.34	N111092	1.07
			21.34	22.56	N111093	1.22
22.56	23.62	BRBS	22.56	23.62	N111094	1.06
		jmonite cemented breccia basalt				
23.62	30.18	BRBS	23.62	25.00	N111095	1.38
		breccia basalt	25.00	26.52	N111096	1.52
			26.52	28.04	N111097	1.52
			28.04	29.11	N111098	1.07
			29.11	30.18	N111099	1.07
30.18	31.09	SHBS	30.18	31.09	N111100	0.91
		sheared breccia basalt				
31.09	33.22	BRBS	31.09	32.46	N111151	1.37
		broken breccia basalt	32.46	33.15	N111152	0.69
			33.15	34.75	N111153	0.00
33.22	37.19	GGBS	34.75	36.27	N111154	1.52
		breccia basalt gouge	36.27	37.19	N111155	0.92
37.19	38.60	MSBS	37.19	38.56	N111156	1.37
		massive basalt				
38.60	40.23	BRBS				
			38.56	40.23	N111157	0.00
		weathered breccia basalt				
40.23	52.88	BRBS	40.23	41.00	N111158	0.77
		reccia basalt	41.00	42.52	N111159	1.52
			42.52	43.28	N111160	0.76

Project: 1642			Hole Number: IC96-04			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			43.28	44.81	N111161	1.53
			44.81	45.57	N111162	0.76
			45.57	46.90	N111163	1.33
			46.90	48.35	N111164	1.45
52.88	**55.78**	**BRBS**				
broken breccia basalt						
55.78	**58.10**	**BRBS**				
breccia basalt						
58.10	**62.70**	**MSBS**				
massive basalt						
62.70	**64.62**	**BRBS**				
breccia bsasalt						
64.62	**72.90**	**CAVN**				
calcite veined basaltic gouge						
72.90	**74.80**	**BRBS**				
calcite veined breccia basalt						
74.80	**75.60**	**MSBS**				
calcite veined massive basalt						
75.60	**78.10**	**MSBS**	75.60	76.81	N111165	1.21
massive basalt			76.81	78.10	N111166	1.29
78.10	**81.00**	**BRBS**	78.10	79.60	N111167	1.50
breccia basalt with pyrite			79.60	81.00	N111168	1.40
81.00	**82.91**	**CAVN**				
calcite vein in basalt						
82.91	**95.10**	**BRBS**	91.14	92.81	N111169	1.67
broken breccia basalt			92.81	93.73	N111170	0.92
95.10	**101.65**	**FBBS**				
faulted massive basalt						
101.65	**115.52**	**BRBS**	103.17	104.85	N111171	1.68
very broken breccia basalt						
115.52	**148.29**	**BRBS**				
broken and faulted breccia basalt						
148.29	**148.29**	**EOH**				

Project: 1642			Hole Number: IC96-05			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	2.15	OBDH	1.83	2.15	N111172	0.32
massive basalt rubble						
2.15	7.60	MSBS	2.15	3.10	N111173	0.95
massive basalt			3.10	4.88	N111174	1.78
			4.88	6.10	N111175	1.22
			6.10	7.60	N111176	1.50
7.60	8.25	QZVN	7.60	8.25	N111177	0.65
quartz-epidote-chlorite vein						
8.25	17.05	MSBS	8.25	9.60	N111178	1.35
massive basalt			9.60	10.36	N111179	0.76
			10.36	11.89	N111180	1.53
			11.89	13.41	N111181	1.52
			13.41	14.94	N111182	1.53
			14.94	16.10	N111183	1.16
			16.10	17.05	N111184	0.95
17.05	17.25	MSCH				
green chert						
17.25	33.70	MSBS				
massive basalt						
33.70	34.90	MSBS				
epidote altered massive basalt						
34.90	46.45	MSBS	34.90	36.27	N111185	1.37
massive basalt			36.27	37.34	N111186	1.07
			37.34	38.86	N111187	1.52
			38.86	40.23	N111188	1.37
			40.23	41.15	N111189	0.92
			41.15	42.06	N111190	0.91
			42.06	42.67	N111191	0.61
			42.67	43.89	N111192	1.22
46.45	48.46	BRBS				
veined breccia basalt						
48.46	55.30	BRBS				
			54.61	55.89	N111193	0.00
breccia basalt						
55.30	60.05	BRBS	55.89	56.45	N111194	0.56
altered breccia basalt			56.45	58.00	N111195	1.55
			58.00	58.77	N111196	0.77
			58.97	60.05	N111197	1.08

From	To	Rocktype & Description	S_from	S_to	Sample	Width
60.05	64.20	BRBS *breccia basalt with massive interbands*	60.05	61.20	N111198	1.15
64.20	66.45	CBMS *black mudstone and chert*				
66.45	66.45	EOH				

Project: 1642 **Hole Number: IC96-06**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
		casing				
2.44	17.48	BRBS	2.44	3.85	N111199	1.41
		breccia basalt	3.85	5.33	N111200	1.48
			5.33	6.10	N111251	0.77
			6.10	7.32	N111252	1.22
			7.32	8.21	N111253	0.89
			8.21	9.34	N111254	1.13
			9.34	10.36	N111255	1.02
			10.36	11.25	N111256	0.89
			11.25	12.69	N111257	1.44
			12.69	13.85	N111258	1.16
			13.85	14.94	N111259	1.09
			14.94	16.46	N111260	1.52
			16.46	17.48	N111261	1.02
17.48	21.34	BRBS	17.48	18.50	N111262	1.02
		breccia basalt weathered	18.50	19.51	N111263	1.01
			19.51	20.50	N111264	0.99
			20.50	21.34	N111265	0.84
21.34	22.00	QZVN	21.34	22.00	N111266	0.66
		milky quarrtz vein				
22.00	24.60	BRBS	22.00	22.60	N111267	0.60
		breccia basalt	22.60	23.77	N111268	1.17
			23.77	24.60	N111269	0.83
24.60	25.45	BRBS	24.60	25.45	N111270	0.85
		weathered breccia basalt				
25.45	26.40	GGBS	25.45	26.40	N111271	0.95
		gouged breccia basalt				
26.40	28.30	BRBS	26.40	27.13	N111272	0.73
		breccia basalt	27.13	28.30	N111273	1.17
28.30	41.40	BRBS	28.30	28.96	N111274	0.66
		breccia basalt	28.96	30.48	N111275	1.52
			30.48	31.70	N111276	1.22
			31.70	32.92	N111277	1.22
41.40	43.30	PHBS				
		porphyritic basalt				
43.30	66.84	BRBS				
		breccia basalt				
66.84	72.53	MSBS				
		massive basalt				

Project: 1642			Hole Number: IC96-06			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
72.53	80.87	BRBS	72.53	73.96	N111278	1.43
breccia basalt			75.90	77.42	N111279	1.52
80.87	92.66	MSBS				
massive basalt						
92.66	92.66	EOH				

Project: 1642 **Hole Number: IC96-07**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	6.40	OBDH	1.83	3.66	N111280	1.83
overburden			3.66	5.49	N111281	1.83
			5.49	6.40	N111282	0.91
6.40	13.05	BRBS	6.40	7.77	N111283	1.37
breccia basalt			7.77	9.14	N111284	1.37
			9.14	10.36	N111285	1.22
			10.36	11.89	N111286	1.53
13.05	17.00	BRBS				
foliated breccia basalt						
17.00	29.10	BRBS				
breccia basalt						
29.10	30.40	MSBS				
			29.53	30.70	N111287	0.00
massive basalt						
30.40	53.34	BRBS	40.84	42.37	N111288	1.53
breccia basalt			52.43	53.34	N111289	0.91
53.34	53.34	EOH				

Project: 1642 **Hole Number: IC96-08**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.50	CSDH				
		Casing				
3.50	4.27	OBDH				
		Overburden				
4.27	12.30	MSBS	4.50	6.50	N111299	2.00
		Massive basalt	6.50	8.20	N111300	1.70
			8.20	10.00	N110951	1.80
			10.00	12.30	N110952	2.30
12.30	14.94	BRBS	12.30	13.41	N110953	1.11
		Rusted breccia basalt	13.41	14.94	N110954	1.53
14.94	16.92	GGBS	14.94	16.92	N110955	1.98
		Basaltic gouge				
16.92	18.60	BRBS	16.92	18.00	N110956	1.08
		Pyritic breccia basalt				
18.60	20.15	HEPY				
			18.00	19.02	N110957	0.00
			19.02	20.30	N110958	0.00
		Hematitic pyrite				
20.15	21.80	BRBS	20.30	21.80	N110959	1.50
		Breccia basalt				
21.80	24.08	HEPY	21.80	22.90	N110960	1.10
		Hematitic pyrite	22.90	24.08	N110961	1.18
24.08	27.00	BRBS	24.08	25.60	N110962	1.52
		Breccia basalt	25.60	26.50	N110963	0.90
			26.50	27.80	N110964	0.00
27.00	32.62	FBBS	27.80	28.65	N110965	0.85
		Faulted basalt	28.65	31.09	N110966	2.44
			31.09	32.62	N110967	1.53
32.62	46.93	SHBS				
		Sheared basalt				
46.93	74.37	MSBS				
		Massive basalt				
74.37	74.37	EOH				

Project: 1642 **Hole Number: IC96-09**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.43	CSDH				
		Casing				
2.43	20.73	OBDH	2.43	5.49	N110251	3.06
		Overburden	5.49	7.31	N110252	1.82
			7.31	10.36	N110253	3.05
			10.36	20.73	N110254	10.37
20.73	24.69	MSBS	20.73	24.69	N110255	3.96
		Massive Basalt				
24.69	27.83	BRBS	24.69	25.95	N110256	1.26
		Breccia Basalt	25.95	27.83	N110257	1.88
27.83	29.87	BRBS	27.83	28.65	N110258	0.82
		Broken Breccia Basalt	28.65	29.87	N110259	1.22
29.87	32.35	HEPY	29.87	30.95	N110260	1.08
		Hematitic Pyrite	30.95	32.35	N110261	1.40
32.35	39.55	BRBS	32.35	33.22	N110262	0.87
		Breccia Basalt	33.22	34.75	N110263	1.53
			34.75	36.27	N110264	1.52
			36.27	37.79	N110265	1.52
			37.79	39.55	N110266	1.76
39.55	40.85	HEPY	39.55	40.84	N110267	1.29
		Hematitic Pyrite				
40.85	41.80	GGBS				
			40.84	42.00	N110268	0.00
		very broken breccia basalt				
41.80	43.50	HEPY	42.00	43.50	N110276	1.50
		Hematitic Pyrite				
43.50	46.60	BRBS	43.50	45.42	N110269	1.92
		Breccia Basalt				
46.60	47.44	HEPY				
			45.42	46.94	N110270	0.00
			46.94	48.00	N110271	0.00
		Hematitic Pyrite				
47.44	54.30	GGBS	48.00	49.23	N110272	1.23
		Gouged Basalt	49.23	50.90	N110273	1.67
			50.90	53.04	N110274	2.14
			53.04	54.50	N110275	0.00
54.30	69.80	BRBS	54.50	55.93	N110277	1.43
		Breccia Basalt	55.93	57.91	N110278	1.98
69.80	74.37	MSBS				
		Massive Basalt				

Project: 1642			Hole Number: IC96-09			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
74.37	74.37	EOH				

Project: 1642			Hole Number: IC96-10			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	15.24	MSBS	3.66	4.42	N110279	0.76
broken massive basalt			4.42	6.90	N110280	2.48
			6.90	8.53	N110281	1.63
			8.53	10.21	N110282	1.68
15.24	82.32	MSBS				
massive basalt						
82.32	83.52	MSBS				
broken massive basalt						
83.52	83.52	EOH				

Project: 1642 **Hole Number: IC96-11**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.02	OBDH				
		Overburden				
3.02	8.00	MSBS	3.66	5.18	N110295	1.52
		Massive basalt	5.18	6.71	N110296	1.53
			6.71	8.00	N110297	1.29
8.00	10.47	MSBS				
		Massive basalt				
10.47	20.79	MSBS				
		Massive basalt				
20.79	33.22	MSBS				
		Fractured massive basalt				
33.22	44.40	MSBS				
		Fractured massive basalt				
44.40	72.85	MSBS	59.13	59.68	N114104	0.55
		Medium grained massive basalt-strongly magnetic	60.66	62.18	N110298	1.52
			62.18	63.70	N110299	1.52
72.85	77.72	MSBS				
		Medium grained massive basalt-weakly magnetic				
77.72	77.72	EOH				

Project: 1642			Hole Number: IC96-11			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.02	OBDH				
Overburden						
3.02	8.00	MSBS	3.66	5.18	N110295	1.52
Massive basalt			5.18	6.71	N110296	1.53
			6.71	8.00	N110297	1.29
8.00	10.47	MSBS				
Massive basalt						
10.47	20.79	MSBS				
Massive basalt						
20.79	33.22	MSBS				
Fractured massive basalt						
33.22	44.40	MSBS				
Fractured massive basalt						
44.40	72.85	MSBS	59.13	59.68	N114104	0.55
Medium grained massive basalt-strongly magnetic			60.66	62.18	N110298	1.52
			62.18	63.70	N110299	1.52
72.85	77.72	MSBS				
Medium grained massive basalt-weakly magnetic						
77.72	77.72	EOH				

Project: 1642 **Hole Number: IC96-12**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	9.14	CSDH				
Casing						
9.14	20.65	MSBS	9.14	10.67	N110300	1.53
Massive basalt			10.67	11.89	N111354	1.22
			11.89	13.72	N111355	1.83
			13.72	14.94	N111356	1.22
			14.94	15.85	N111357	0.91
			15.85	17.07	N111358	1.22
			17.07	18.59	N111359	1.52
			18.59	20.65	N111360	2.06
20.65	30.79	FBBS	20.65	22.25	N111361	1.60
Basaltic fault breccia			22.25	23.77	N111362	1.52
			23.77	24.99	N111363	1.22
			24.99	26.06	N111364	1.07
			26.06	27.43	N111365	1.37
			27.43	29.57	N111366	2.14
			29.57	30.79	N111367	1.22
30.79	40.70	MSBS				
Massive basalt						
40.70	42.80	MSBS				
Slightly weathered massive basalt						
42.80	52.00	MSBS				
Massive basalt						
52.00	70.41	BRBS				
Breccia basalt						
70.41	70.41	EOH				

Project: 1642			Hole Number: IC96-13			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	6.27	MSBS	4.27	5.79	N111368	1.52
massive basalt						
6.27	8.34	HECH	7.32	8.34	N111369	1.02
hematitic chert						
8.34	10.20	MSBS				
massive basalt						
10.20	13.49	FBBS	10.20	11.88	N111370	1.68
faulted basalt			11.88	13.49	N111371	1.61
13.49	17.05	MSBS	13.49	14.94	N111372	1.45
massive basalt			14.94	16.46	N111373	1.52
			16.46	17.05	N111374	0.59
17.05	19.90	FBBS				
faulted and gouged basalt						
19.90	25.24	MSBS	24.08	25.24	N111375	1.16
massive basalt						
25.24	30.02	BRBS				
breccia basalt						
30.02	31.70	CRVN	30.02	31.70	N111376	1.68
brecciated carbonate vein						
31.70	39.10	FBBS				
faulted basalt and vein						
39.10	46.72	MSBS	39.93	42.37	N111377	2.44
massive basalt			42.37	43.89	N111378	1.52
			43.89	45.42	N111379	1.53
			45.42	46.72	N111380	1.30
46.72	48.58	MSBS	46.72	47.40	N111381	0.68
fractured basalt			47.40	48.58	N111382	1.18
48.58	50.50	BRBS	48.58	49.99	N111383	1.41
hematitic breccia basalt						
50.50	51.25	HECH				
hematitic chert						
51.25	52.50	PYMS				
massive pyrite						
52.50	52.90	BRBS				
hematitic breccia basalt						
52.90	53.15	MSCH				
massive chert						
53.15	55.80	PYMS				

Project: 1642			Hole Number: IC96-13			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			49.99	51.28	N111384	0.00
			51.28	53.04	N111385	0.00
			53.04	54.56	N111386	0.00
			54.56	55.83	N111387	0.00
		massive pyrite				
55.80	**57.03**	**MSBS**	55.83	57.03	N111388	1.20
		massive basalt				
57.03	**63.70**	**PHBS**	57.03	59.13	N111389	2.10
		porphyritic breccia basalt	59.13	60.66	N111390	1.53
			60.66	62.18	N111391	1.52
			62.18	63.70	N111392	1.52
63.70	**74.52**	**PHBS**				
		porphyritic breccia basalt				
74.52	**81.67**	**PHBS**				
		porphyritic basalt				
81.67	**98.76**	**MSBS**	89.61	91.14	N111393	1.53
		massive basalt				
98.76	**98.76**	**EOH**				

Project: 1642			Hole Number: IC96-13			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	6.27	MSBS	4.27	5.79	N111368	1.52
massive basalt						
6.27	8.34	HECH	7.32	8.34	N111369	1.02
hematitic chert						
8.34	10.20	MSBS				
massive basalt						
10.20	13.49	FBBS	10.20	11.88	N111370	1.68
faulted basalt			11.88	13.49	N111371	1.61
13.49	17.05	MSBS	13.49	14.94	N111372	1.45
massive basalt			14.94	16.46	N111373	1.52
			16.46	17.05	N111374	0.59
17.05	19.90	FBBS				
faulted and gouged basalt						
19.90	25.24	MSBS	24.08	25.24	N111375	1.16
massive basalt						
25.24	30.02	BRBS				
breccia basalt						
30.02	31.70	CRVN	30.02	31.70	N111376	1.68
brecciated carbonate vein						
31.70	39.10	FBBS				
faulted basalt and vein						
39.10	46.72	MSBS	39.93	42.37	N111377	2.44
massive basalt			42.37	43.89	N111378	1.52
			43.89	45.42	N111379	1.53
			45.42	46.72	N111380	1.30
46.72	48.58	MSBS	46.72	47.40	N111381	0.68
fractured basalt			47.40	48.58	N111382	1.18
48.58	50.50	BRBS	48.58	49.99	N111383	1.41
hematitic breccia basalt						
50.50	51.25	HECH				
hematitic chert						
51.25	52.50	PYMS				
massive pyrite						
52.50	52.90	BRBS				
hematitic breccia basalt						
52.90	53.15	MSCH				
massive chert						
53.15	55.80	PYMS				

Project: 1642			Hole Number:IC96-13			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			49.99	51.28	N111384	0.00
			51.28	53.04	N111385	0.00
			53.04	54.56	N111386	0.00
			54.56	55.83	N111387	0.00
		massive pyrite				
55.80	**57.03**	**MSBS**	55.83	57.03	N111388	1.20
		massive basalt				
57.03	**63.70**	**PHBS**	57.03	59.13	N111389	2.10
		porphyritic breccia basalt	59.13	60.66	N111390	1.53
			60.66	62.18	N111391	1.52
			62.18	63.70	N111392	1.52
63.70	**74.52**	**PHBS**				
		porphyritic breccia basalt				
74.52	**81.67**	**PHBS**				
		porphyritic basalt				
81.67	**98.76**	**MSBS**	89.61	91.14	N111393	1.53
		massive basalt				
98.76	**98.76**	**EOH**				

Project: 1642 **Hole Number: IC96-14**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.90	OBDH *overburden*	0.00	2.90	N111394	2.90
2.90	4.57	PYSM *limonite boxwork*	2.90	4.57	N111395	1.67
4.57	8.20	BRBS *weathered breccia basalt*	4.57	5.33	N111396	0.76
			5.33	6.71	N111397	1.38
			6.71	8.20	N111398	1.49
8.20	20.12	FBBS *basaltic fault zone*	8.20	8.83	N111399	0.63
			8.83	9.75	N111400	0.92
			9.75	10.97	N111401	1.22
			10.97	12.19	N111402	1.22
			12.19	14.17	N111403	1.98
			14.17	16.15	N111404	1.98
			16.15	17.37	N111405	1.22
			17.37	18.90	N111406	1.53
			18.90	20.12	N111407	1.22
20.12	21.05	SSSG *hematite rich stringer zone*	20.12	21.05	N111408	0.93
21.05	21.34	PYMS *massive pyrite*	21.05	21.34	N111409	0.29
21.34	24.50	BRBS *breccia basalt with hematite-pyrite stringers*	21.34	23.16	N111410	1.82
			23.16	24.50	N111411	1.34
24.50	26.30	SSSG *stringer zone*	24.50	24.99	N111412	0.49
			24.99	26.30	N111413	1.31
26.30	27.50	PYMS *massive sulphides with breccia basalt*				
27.50	28.96	BRBS *pyritic breccia basalt*	26.30	28.96	N111414	0.00
28.96	34.44	BRBS *epidote altered breccia bnasalt*	28.96	29.65	N111415	0.69
			29.65	31.09	N111416	1.44
			31.09	32.61	N111417	1.52
			32.61	34.44	N111418	1.83
34.44	38.60	MSBS *massive basalt*	34.44	36.73	N111419	2.29
			36.73	38.86	N111420	0.00
38.60	43.60	BRBS *breccia basalt*	38.86	40.49	N111421	1.63
			40.49	43.28	N111422	2.79
43.60	57.00	BRBS *foliated breccia basalt*				

Project: 1642			*Hole Number:IC96-14*			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
57.00	57.00	EOH				

Project: 1642 **Hole Number: IC96-15**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.82	CSDH				
		casing				
1.82	7.32	OBDH				
			0.00	7.32	N111423	0.00
		basaltic soil				
7.32	10.36	PHBS	7.32	8.84	N111424	1.52
		porphyritic basalt	8.84	10.36	N111425	1.52
10.36	13.07	FBBS	10.36	11.89	N111426	1.53
		broken porphyritic basalt	11.89	13.07	N111427	1.18
13.07	14.84	PHBS	13.07	14.84	N111428	1.77
		porphyritic basalt				
14.84	19.00	FBBS	14.84	16.46	N111429	1.62
		broken porphyritic basalt	16.46	17.98	N111430	1.52
			17.98	19.00	N111431	1.02
19.00	21.30	PHBS	19.00	21.30	N111432	2.30
		porphyritic breccia basalt				
21.30	23.70	FBBS	21.30	22.56	N111433	1.26
		broken porphyritic basalt	22.56	23.25	N111434	0.69
			23.25	24.40	N111435	0.00
23.70	26.90	PHBS	24.40	26.90	N111436	2.50
		porphyritic breccia basalt				
26.90	27.25	GGBS	26.90	27.25	N111437	0.35
		basaltic gouge				
27.25	29.20	PHBS	27.25	28.65	N111438	1.40
		porphyritic breccia basalt				
29.20	30.28	BRBS				
			28.65	30.28	N111439	0.00
		breccia basalt				
30.28	31.70	BRBS	30.28	31.70	N111440	1.42
		epidote-altered breccia basalt				
31.70	45.67	BRBS	31.70	33.22	N111441	1.52
		breccia basalt	33.22	34.75	N111442	1.53
			34.75	36.27	N111443	1.52
			36.27	37.80	N111444	1.53
			37.80	39.32	N111445	1.52
			39.32	40.84	N111446	1.52
			40.84	42.37	N111447	1.53
			42.37	43.89	N111448	1.52
			43.89	45.67	N111449	1.78
45.67	46.25	GGBS	45.67	46.25	N111450	0.58

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Project: 1642			Hole Number:IC96-15			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
gouged basalt						
46.25	**47.14**	**MSBS**	46.25	47.14	N111451	0.89
veined massive basalt						
47.14	**52.05**	**SGBS**	47.14	48.46	N111452	1.32
weak stringer sulphides			48.46	49.99	N111453	1.53
			49.99	52.05	N111454	2.06
52.05	**58.30**	**BRBS**	52.05	54.10	N111455	2.05
hematitic breccia basalt			54.10	55.47	N111456	1.37
			55.47	57.00	N111457	1.53
			57.00	58.30	N111458	1.30
58.30	**59.70**	**MSBS**	58.30	59.70	N111459	1.40
calcite veined basalt						
59.70	**62.55**	**PHBS**	59.70	61.57	N111460	1.87
porphyritic basalt			61.57	62.55	N111461	0.98
62.55	**63.28**	**CAVN**	62.55	63.28	N111462	0.73
calcite vein						
63.28	**69.80**	**BRBS**	63.28	66.14	N111463	2.86
breccia basalt			66.14	68.28	N111464	2.14
			68.28	69.80	N111465	1.52
69.80	**89.55**	**MSBS**	69.80	71.32	N111466	1.52
massive basalt			71.32	74.37	N111467	3.05
			86.56	88.29	N111468	1.73
			88.29	89.55	N111469	1.26
89.55	**89.55**	**EOH**				

Project: 1642 **Hole Number: IC96-16**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		Casing				
1.83	2.35	OBDH				
		Overburden				
2.35	6.40	MSBS	3.66	5.64	N111470	1.98
		Massive Basalt	5.64	6.40	N111471	0.76
6.40	14.00	BRBS	6.40	8.84	N111472	2.44
		Breccia Basalt	8.84	10.67	N111473	1.83
			10.67	12.50	N111474	1.83
			12.50	13.72	N111475	1.22
14.00	15.50	BRBS				
			13.72	15.85	N111476	0.00
		Breccia Basalt				
15.50	20.50	BRBS	15.85	18.15	N111477	2.30
		Breccia Basalt	18.15	20.42	N111478	2.27
20.50	23.55	HEPY				
			20.42	22.10	N111479	0.00
			22.10	23.77	N111480	0.00
		Hematitic Pyrite				
23.55	28.65	BRBS	23.77	26.21	N111481	2.44
		Breccia Basalt	26.21	27.58	N111482	1.37
			27.58	28.96	N111483	0.00
28.65	31.40	0	28.96	30.75	N111484	1.79
			30.75	32.00	N111485	0.00
		Faulted Basalt				
31.40	45.60	MSBS	32.00	33.07	N111486	1.07
		Massive Basalt	33.07	34.14	N111597	1.07
			34.14	35.51	N111598	1.37
			35.51	37.03	N111599	1.52
			37.03	38.56	N111600	1.53
			38.56	39.93	N111601	1.37
			39.93	40.84	N111602	0.91
			40.84	42.75	N111603	1.91
			42.75	43.65	N111604	0.90
45.60	45.60	EOH				

Project: 1642 **Hole Number: IC96-17**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	12.00	BRBS	1.22	3.51	N111487	2.29
		breccia basalt	3.51	5.79	N111488	2.28
			5.79	8.23	N111489	2.44
			8.23	9.75	N111490	1.52
			9.75	12.00	N111491	2.25
12.00	22.00	BRBS	12.00	14.48	N111492	2.48
		slightly weathered breccia basalt	14.48	17.07	N111493	2.59
			17.07	18.59	N111494	1.52
			18.59	20.12	N111495	1.53
			20.12	22.00	N111496	1.88
22.00	23.32	GGBS	22.00	23.32	N111497	1.32
		basalt gouge				
23.32	29.57	BRBS	23.32	24.99	N111498	1.67
		foliated breccia basalt	24.99	26.52	N111499	1.53
			26.52	28.04	N111500	1.52
			28.04	29.57	N111501	1.53
29.57	44.20	BRBS				
		breccia basalt				
44.20	61.72	BRBS				
		breccia basalt				
61.72	64.62	PHBS				
		porphyritic basalt				
64.62	64.62	EOH				

Project: 1642 **Hole Number: IC96-18**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	**4.88**	**CSDH**				
			0.00	9.45	N111502	0.00
casing						
4.88	**14.02**	**OBDH**	9.45	14.02	N111503	4.57
basalt rubble						
14.02	**27.03**	**PHBSp**	14.02	16.16	N111504	2.14
porphyritic breccia basalt		*'aphanitic'*	16.16	17.98	N111505	1.82
			17.98	19.51	N111506	1.53
			19.51	21.22	N111507	1.71
			21.22	22.56	N111508	1.34
			22.56	24.22	N111509	1.66
			24.22	25.60	N111510	1.38
			25.60	27.03	N111511	1.43
27.03	**29.70**	**SGBS**	27.03	28.65	N111512	1.62
stringer sulphides		*'aphanitic'*	28.65	29.70	N111513	1.05
29.70	**30.24**	**PYMS**	29.70	30.24	N111514	0.54
pyritic sulphides in BRBS						
30.24	**34.75**	**PHMSm**	30.24	32.31	N111515	2.07
porphyritic breccia basalt		*'aphanitic'*	32.31	34.75	N111516	2.44
34.75	**36.27**	**SGBS**	34.75	36.27	N111517	1.52
stringer sulphides						
36.27	**42.15**	**SGBS**	36.27	37.80	N111518	1.53
stringer sulphides			37.80	39.32	N111519	1.52
			39.32	40.84	N111520	1.52
42.15	**42.75**	**SGBS**				
			40.84	43.10	N111521	0.00
stringer sulphides						
42.75	**54.56**	**BRBS**	43.10	45.42	N111522	2.32
breccia basalt		*'aphani*	45.42	46.94	N111523	1.52
			46.94	48.46	N111524	1.52
			48.46	49.99	N111525	1.53
			49.99	51.51	N111526	1.52
			51.51	53.04	N110223	1.53
			53.04	54.56	N110224	1.52
54.56	**61.87**	**BRBS**	54.56	56.08	N110225	1.52
breccia basalt		*'aphani*	56.08	58.85	N110226	2.77
			58.85	60.35	N110227	1.50
			60.35	61.87	N110228	1.52
61.87	**62.60**	**BRBS**				
epidote altered breccia basalt		*'aphanitic'*				

Project: 1642			Hole Number: IC96-18			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
62.60	**65.70 BRBS**					
			61.87	64.92	N110229	0.00
			64.92	66.45	N110230	0.00
breccia basalt		*'aphani*				
65.70	**68.37 BRBS**		66.45	68.37	N110231	1.92
breccia basalt , foliated		*'aphanitic'*				
68.37	**69.90 FBBS**		68.37	69.90	N110232	1.53
faulted breccia basalt		*'aphanitic'*				
69.90	**73.50 BRBS**		69.90	71.32	N110233	1.42
breccia basalt		*'aphani*	71.32	73.50	N110234	2.18
73.50	**77.42 MSBS**		73.50	74.37	N110235	0.87
calcite veined massive basalt		*'grainy'*				
77.42	**77.42 EOH**					

Project: 1642 **Hole Number: IC96-19**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
Casing						
1.83	5.18	OBDH				
Sand						
5.18	14.94	OBDH	5.18	12.80	N111527	7.62
Overburden and MSBS core rubble			12.80	14.94	N111528	2.14
14.94	29.70	MSBS	14.94	16.76	N111529	1.82
Massive basalt			16.76	19.05	N111530	2.29
			19.05	21.95	N111531	2.90
			21.95	23.73	N111532	1.78
29.70	43.23	MSBS				
Fractured massive basalt						
43.23	58.32	MSBS				
Massive basalt						
58.32	58.32	EOH				

Project: 1642 **Hole Number: IC96-19**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		Casing				
1.83	5.18	OBDH				
		Sand				
5.18	14.94	OBDH	5.18	12.80	N111527	7.62
		Overburden and MSBS core rubble	12.80	14.94	N111528	2.14
14.94	29.70	MSBS	14.94	16.76	N111529	1.82
		Massive basalt	16.76	19.05	N111530	2.29
			19.05	21.95	N111531	2.90
			21.95	23.73	N111532	1.78
29.70	43.23	MSBS				
		Fractured massive basalt				
43.23	58.32	MSBS				
		Massive basalt				
58.32	58.32	EOH				

Project: 1642 | **Hole Number: IC96-20**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	7.30	PHBS	1.22	5.49	N111533	4.27
		porphyritic breccia basalt	5.49	7.30	N111534	1.81
7.30	10.36	BRBS	7.30	8.23	N111535	0.93
		breccia basalt	8.23	10.36	N111536	2.13
10.36	11.89	GGBS				
		fault gouge basalt				
11.89	12.61	BRBS				
		breccia basalt				
12.61	14.06	PHBS				
		porphyritic breccia basalt				
14.06	15.64	GGBS				
			10.36	13.41	N111537	0.00
			13.41	15.80	N111538	0.00
		gouge and ferricrete				
15.64	20.07	PHBS	15.80	17.37	N111539	1.57
		porphyritic breccia basalt	17.37	19.96	N111540	2.59
			19.96	21.96	N111541	0.00
20.07	24.08	BRBS	21.96	24.08	N111542	2.12
		breccia basalt				
24.08	37.50	SGBS	24.08	27.13	N111543	3.05
		stringer basalt	27.13	30.18	N111544	3.05
			30.18	33.22	N111545	3.04
			33.22	36.27	N111546	3.05
			36.27	37.50	N111547	1.23
37.50	41.45	FBBS	37.50	39.32	N111548	1.82
		fault breccia basalt	39.32	41.45	N111549	2.13
41.45	48.20	BRBS	41.45	43.13	N111550	1.68
		breccia basalt	43.13	45.42	N110215	2.29
			45.42	48.20	N110216	2.78
48.20	51.10	SGBS	48.20	49.99	N110217	1.79
		weak stringer basalt	49.99	51.10	N110218	1.11
51.10	54.95	BRBS	51.10	52.73	N110219	1.63
		poor foliated breccia basalt	52.73	54.95	N110220	2.22
54.95	63.70	MSBS	54.95	56.82	N110221	1.87
		massive basalt	56.82	58.52	N110222	1.70
63.70	63.70	EOH				

Project: 1642 **Hole Number: IC96-21**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
		casing				
2.44	3.66	OBDH				
		gravelly overburden				
3.66	12.28	BRBS	3.66	6.25	N111551	2.59
		limonitic breccia basalt	6.25	7.92	N111552	1.67
			7.92	9.75	N111553	1.83
			9.75	12.00	N111554	2.25
12.28	13.00	FBCH				
		limonitic fault breccia				
13.00	14.32	MSCHgr				
			12.00	14.32	N111555	0.00
		fractured massive grey chert				
14.32	15.85	CBMS	14.32	15.85	N111556	1.53
		laminated carbonaceous mudstone				
15.85	21.00	RBCH	15.85	18.49	N111557	2.64
		fractured grey ribbon chert	18.49	21.00	N111558	2.51
21.00	23.01	CBMS	21.00	23.01	N111559	2.01
		laminated carbonaceous mudstone				
23.01	27.84	RBCH	23.01	24.69	N111560	1.68
		fractured grey ribbon chert	24.69	25.60	N111561	0.91
			25.60	27.84	N111562	2.24
27.84	31.40	CBMS	27.84	31.40	N111563	3.56
		black mudstone rubble				
31.40	35.50	RBCH				
		green-grey ribbon chert				
35.50	46.18	RBCH				
		dark grey-black ribbon chert				
46.18	46.18	EOH				

Project: 1642 **Hole Number: IC96-22**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
Casing						
1.22	6.10	MSBS	4.60	4.70	N111564	0.10
Massive basalt			4.70	6.10	N111565	1.40
6.10	7.77	GGBS	6.10	7.77	N111566	1.67
Basaltic gouge						
7.77	11.80	BRBS	7.77	8.23	N111567	0.46
Breccia basalt			8.23	10.06	N111568	1.83
			10.06	12.50	N111569	0.00
11.80	18.90	FBBS	12.50	15.54	N111570	3.04
Basalt fault breccia			15.54	17.68	N111571	2.14
18.90	19.40	CAVN				
			17.68	19.60	N111572	0.00
Brecciated calcite vein						
19.40	31.25	BRBS	19.60	21.64	N111573	2.04
Slightly weathered breccia basalt			24.50	24.99	N111574	0.49
31.25	38.70	BRBS				
Unweathered breccia basalt						
38.70	44.50	MSBS				
Massive basalt						
44.50	44.50	EOH				

Project: 1642 **Hole Number: IC96-23**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	0				
		casing				
1.83	10.00	BRBS	1.83	4.27	N111575	2.44
		breccia basalt	4.27	5.79	N111576	1.52
			5.79	7.32	N111577	1.53
			7.32	8.84	N111578	1.52
			8.84	10.97	N111579	0.00
10.00	12.95	PYMS	10.97	12.95	N111580	1.98
		limonite				
12.95	22.60	BRBS	12.95	14.94	N111581	1.99
		breccia basalt	14.94	17.37	N111582	2.43
			17.37	19.00	N111583	1.63
			19.00	20.73	N111584	1.73
			20.73	22.60	N111585	1.87
22.60	36.73	FBBS	22.60	25.91	N111586	3.31
		faulted breccia basalt				
36.73	45.57	FBBS				
		massive fault breccia				
45.57	62.68	MSBS				
		massive basalt				
62.68	63.55	MSCH	62.68	63.55	N113719	0.87
		massive red chert				
63.55	72.45	MSBS				
		massive basalt				
72.45	104.85	BRBS				
		breccia basalt				
104.85	104.85	EOH				

Project: 1642 **Hole Number: IC96-24**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
			0.00	2.13	N111587	0.00
		Casing				
1.22	13.87	MSBS	2.13	4.42	N111588	2.29
		Massive basalt	4.42	6.71	N111589	2.29
			6.71	9.14	N111590	2.43
			9.14	11.43	N111591	2.29
			11.43	13.41	N111592	1.98
			13.41	15.54	N111593	0.00
13.87	18.70	MSBS	15.54	16.76	N111594	1.22
		Aphanitic massive basalt	16.76	18.70	N111595	1.94
18.70	26.21	MSBS	18.70	21.03	N111596	2.33
		Rubbly aphanitic massive basalt				
26.21	32.00	MSBS				
		Massive basalt				
32.00	36.27	MSBS				
		Weathered massive basalt				
36.27	45.44	MSBS				
		Massive basalt				
45.44	57.60	RBCHgy				
		Dark grey ribbon chert				
57.60	60.25	FBCH				
		Brecciated dark grey ribbon chert				
60.25	73.45	RBCHgy				
		Grey ribbon chert				
73.45	74.23	SCPH				
		Sericite-chlorite phyllite				
74.23	76.90	GGMS				
		Black mud gouge				
76.90	78.03	RBCHbk				
		Black ribbon chert				
78.03	78.03	EOH				

Project: 1642 **Hole Number: IC96-25**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing, no core				
1.22	8.00	OBDH	1.22	7.62	N111605	6.40
			7.62	9.75	N111606	0.00
		overburden, mixed lithology				
8.00	15.24	MSBS	9.75	11.58	N111607	1.83
		fractured, massive basalt	11.58	15.24	N111608	3.66
15.24	16.78	GGBS	15.24	16.78	N111609	1.54
		limonitic fault gouge				
16.78	18.90	LCDH				
		no recovery				
18.90	22.25	BRBS	18.90	21.03	N111610	2.13
			21.03	23.47	N111611	0.00
		chloritic, breccia basalt				
22.25	32.26	BRBS	23.47	25.60	N111612	2.13
		chloritic breccia basalt	25.60	27.43	N111613	1.83
			27.43	29.56	N111614	2.13
			29.56	32.26	N111615	2.70
32.26	34.75	GGBS	32.26	34.75	N111616	2.49
		gouge and fault breccia				
34.75	39.12	FBBS	34.75	38.56	N111617	3.81
		gouge and fault breccia				
39.12	41.15	GGMS				
			38.56	41.15	N111618	0.00
		gouge and fault breccia				
41.15	44.20	BRMS	41.15	42.06	N111619	0.91
		mudstone fault breccia	42.06	44.20	N111620	2.14
44.20	45.72	LCDH				
		fault				
45.72	51.82	RBCH	45.72	47.24	N111621	1.52
		grey ribbon chert	47.24	48.77	N111622	1.53
51.82	51.82	EOH				

Project: 1642 **Hole Number: IC96-26**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	11.40	BRBS	1.83	5.49	N111623	3.66
		breccia basalt	5.49	9.45	N111624	3.96
			9.45	11.28	N111625	1.83
11.40	14.02	PYMS				
		limonite with box work				
14.02	15.54	BRBS				
			11.28	13.40	N111626	0.00
			13.40	15.54	N111627	0.00
		breccia basalt				
15.54	20.72	MSBS	15.54	17.98	N111628	2.44
		massive basalt	17.98	20.72	N111629	2.74
20.72	24.65	BRBS	20.72	22.86	N111630	2.14
			22.86	24.99	N111631	0.00
		breccia basalt				
24.65	36.42	BRBS	24.99	26.52	N111632	1.53
		breccia basalt	26.52	28.04	N111633	1.52
			28.04	29.57	N111634	1.53
36.42	56.39	MSBS				
		massive basalt				
56.39	56.39	EOH				

Project: 1642 **Hole Number: IC96-27**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	24.09	BRBS	1.83	3.96	N111635	2.13
chloritic breccia basalt			3.96	5.49	N111636	1.53
			5.49	9.75	N111637	4.26
			9.75	11.58	N111638	1.83
			11.58	14.33	N111639	2.75
			14.33	15.85	N111640	1.52
			15.85	18.90	N111641	3.05
			18.90	21.34	N111642	2.44
			21.34	23.25	N111643	1.91
			23.25	24.84	N111644	0.00
24.09	27.85	FBBS	24.84	26.82	N111645	1.98
faulted breccia			26.82	27.85	N111646	1.03
27.85	32.25	BRBS	27.85	29.57	N111647	1.72
chloritic breccia basalt			29.57	30.94	N111648	1.37
			30.94	32.46	N111649	0.00
32.25	35.91	FBBS	32.46	33.53	N111650	1.07
faulted breccia			33.53	35.36	N111651	1.83
			35.36	37.19	N111652	0.00
35.91	42.88	FBBS	37.19	38.71	N111653	1.52
faulted breccia			38.71	40.84	N111654	2.13
42.88	45.00	GGMS				
carbonaceous mudstone gouge						
45.00	46.33	RBCH				
carbonaceous ribbon chert						
46.33	46.33	EOH				

Project: 1642 **Hole Number: IC96-27**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	24.09	BRBS	1.83	3.96	N111635	2.13
chloritic breccia basalt			3.96	5.49	N111636	1.53
			5.49	9.75	N111637	4.26
			9.75	11.58	N111638	1.83
			11.58	14.33	N111639	2.75
			14.33	15.85	N111640	1.52
			15.85	18.90	N111641	3.05
			18.90	21.34	N111642	2.44
			21.34	23.25	N111643	1.91
			23.25	24.84	N111644	0.00
24.09	27.85	FBBS	24.84	26.82	N111645	1.98
faulted breccia			26.82	27.85	N111646	1.03
27.85	32.25	BRBS	27.85	29.57	N111647	1.72
chloritic breccia basalt			29.57	30.94	N111648	1.37
			30.94	32.46	N111649	0.00
32.25	35.91	FBBS	32.46	33.53	N111650	1.07
faulted breccia			33.53	35.36	N111651	1.83
			35.36	37.19	N111652	0.00
35.91	42.88	FBBS	37.19	38.71	N111653	1.52
faulted breccia			38.71	40.84	N111654	2.13
42.88	45.00	GGMS				
carbonaceous mudstone gouge						
45.00	46.33	RBCH				
carbonaceous ribbon chert						
46.33	46.33	EOH				

Project: 1642 **Hole Number: IC96-28**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	5.18	MSBS	1.22	3.05	N111656	1.83
		massive basalt	3.05	5.18	N111657	2.13
5.18	8.45	FBBS	5.18	8.45	N111658	3.27
		fault breccia basalt				
8.45	16.60	MSBS	8.45	11.28	N111659	2.83
		massive basalt	11.28	12.80	N111660	1.52
			12.80	14.33	N111661	1.53
			14.33	16.60	N111662	2.27
16.60	17.37	HECH				
		hematitic chert				
17.37	18.70	MSBS				
			16.60	18.90	N111663	0.00
		massive basalt, with hematite				
18.70	39.20	MSBS	18.90	20.42	N111664	1.52
		massive basalt	20.42	21.95	N111665	1.53
			21.95	23.47	N111666	1.52
39.20	40.00	HECH	39.20	40.00	N113755	0.80
		hematitic chert				
40.00	57.00	MSBS				
		massive basalt				
57.00	66.45	BRBS				
		breccia basalt				
66.45	69.45	FBBS				
		"fault" breccia basalt, non tectonic breccia				
69.45	70.71	BRBS				
		breccia basalt				
70.71	72.61	MSBS				
		massive basalt				
72.61	83.95	BRBS				
		breccia basalt				
83.95	85.04	FBBS				
		"fault" breccia basalt, non tectonic breccia				
85.04	85.04	EOH				

Project: 1642			Hole Number: IC96-29			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
Casing - no core recovered						
1.83	3.50	MSBS	1.83	3.50	N111667	1.67
Massive basalt						
3.50	5.33	FBBS	3.50	5.33	N111668	1.83
Fault breccia basalt - fault breccia and gouge zone						
5.33	8.22	MSBS	5.33	7.01	N111669	1.68
Massive basalt			7.01	8.22	N111670	1.21
8.22	15.85	FBBS	8.22	10.21	N111671	1.99
Fault breccia basalt - fault breccia and gouge zone			10.21	13.11	N111672	2.90
			13.11	15.85	N111673	2.74
15.85	24.38	MSBS	15.85	17.75	N111674	1.90
Massive basalt			17.75	19.20	N111675	1.45
			19.20	20.73	N111676	1.53
			20.73	21.95	N111677	1.22
			21.95	23.16	N111678	1.21
			23.16	24.38	N111679	1.22
24.38	25.70	FBBS	24.38	25.70	N111680	1.32
Fault breccia basalt - fault breccia and gouge zone						
25.70	25.95	PYSM				
Fault brecciated sulphides						
25.95	26.21	HEMS				
Brecciated hematitic mudstone						
26.21	26.97	PYSM				
			25.70	26.97	N111681	0.00
Massive sulphides - mainly pyrite with chalcopyrite						
26.97	28.15	PHBS	26.97	28.15	N111682	1.18
Porphyritic basalt - supergene weathered						
28.15	44.75	PHBS	28.15	29.41	N111683	1.26
Chlorite porphyry basalt			29.41	30.94	N111684	1.53
			30.94	32.31	N111685	1.37
			32.31	33.83	N111686	1.52
			33.83	35.51	N111687	1.68
			35.51	37.03	N111688	1.52
			37.03	38.56	N111689	1.53
			38.56	40.69	N111690	2.13
			40.69	42.37	N111691	1.68
			42.37	44.75	N111692	2.38
44.75	48.20	PHBS	44.75	46.33	N111693	1.58
Brecciated porphyry basalt - narrow breccia zones			46.33	47.40	N111694	1.07

Project: 1642			Hole Number: IC96-29			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			47.40	48.92	N111695	0.00
48.20	53.00	BRBS	48.92	50.44	N111696	1.52
Breccia basalt - weakly supergene altered			50.44	53.00	N111697	2.56
53.00	65.84	BRBS	53.00	55.17	N111698	2.17
Breccia basalt			55.17	56.85	N111699	1.68
			56.85	58.52	N111700	1.67
			58.52	60.05	N111701	1.53
65.84	65.84	EOH				

Project: 1642 **Hole Number: IC96-30**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
			0.00	2.13	N111702	0.00
		Casing				
1.83	7.01	HECH	2.13	3.66	N111703	1.53
		Hematitic chert	3.66	5.18	N111704	1.52
			5.18	7.01	N111705	1.83
7.01	11.28	MSBS	7.01	9.14	N111706	2.13
		Massive basalt	9.14	11.28	N111707	2.14
11.28	12.19	GGBS	11.28	12.19	N111708	0.91
		Limonitic basalt gouge				
12.19	18.90	MSBS	12.19	14.33	N111709	2.14
		Massive basalt	14.33	17.37	N111710	3.04
			17.37	18.90	N111711	1.53
18.90	32.61	MSBS	18.90	20.42	N111712	1.52
		Aphanitic massive basalt	20.42	21.95	N111713	1.53
			21.95	23.47	N111714	1.52
			23.47	24.99	N111715	1.52
			24.99	26.52	N111716	1.53
			26.52	28.04	N111717	1.52
			28.04	29.57	N111718	1.53
			29.57	31.09	N111719	1.52
			31.09	32.61	N111720	1.52
32.61	39.70	GGBS	32.61	34.14	N111721	1.53
		Basalt gouge and breccia	34.14	35.66	N111722	1.52
			35.66	37.19	N111723	1.53
			37.19	39.70	N111724	2.51
39.70	45.40	MSBS	39.70	42.06	N111725	2.36
		Massive basalt	42.06	44.20	N111726	2.14
45.40	46.10	GGBS				
			44.20	46.10	N111727	0.00
		Basalt gouge				
46.10	47.09	HEMS	46.10	47.09	N111728	0.99
		Hematitic mudstone breccia				
47.09	53.77	FBBS	47.09	48.16	N111729	1.07
		Basalt fault breccia	48.16	49.38	N111730	1.22
			49.38	51.05	N111731	1.67
			51.05	52.73	N111732	1.68
			52.73	53.77	N111733	1.04
53.77	54.00	PYMS	53.77	54.00	N111734	0.23
		Massive pyrite				

From	To	Rocktype & Description	S_from	S_to	Sample	Width
54.00	55.66	MSBS	54.00	55.66	N111735	1.66
		Veined massive basalt				
55.66	82.30	BRBS	55.66	57.45	N111736	1.79
		Incipiently auto-brecciated basalt	57.45	59.74	N111737	2.29
			59.74	61.57	N111738	1.83
			61.57	63.09	N111739	1.52
			63.09	64.62	N111740	1.53
82.30	82.30	EOH				

Project: 1642 **Hole Number: IC96-31**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		Casing, no recovery				
1.83	6.71	BCDH				
			1.83	6.90	N111741	0.00
		Broken rubble, poor recovery				
6.71	7.01	BCDH	6.90	7.01	N111742	0.11
		Broken rubble				
7.01	28.04	PHBS	7.01	9.75	N111743	2.74
		Porphyritic basalt	9.75	12.04	N111744	2.29
			12.04	14.33	N111745	2.29
			14.33	17.37	N111746	3.04
			17.37	19.81	N111747	2.44
			19.81	21.64	N111748	1.83
			21.64	24.08	N111749	2.44
			24.08	25.76	N111750	1.68
			25.76	28.04	N111751	2.28
28.04	29.56	BRBS	28.04	29.56	N111752	1.52
		Breccia basalt				
29.56	31.70	FBBS	29.56	31.70	N111753	2.14
		Fault breccia basalt				
31.70	37.19	MSBS	31.70	32.92	N111754	1.22
		Massive basalt	32.92	34.14	N111755	1.22
			34.14	35.66	N111756	1.52
			35.66	37.19	N111757	1.53
37.19	40.23	BRBS	37.19	38.71	N111758	1.52
		Breccia basalt	38.71	40.23	N111759	1.52
40.23	45.75	MSBS	40.23	41.76	N111760	1.53
		Massive basalt	41.76	43.28	N111761	1.52
			43.28	45.75	N111762	2.47
45.75	60.05	BRBS	45.75	47.40	N111763	1.65
		Breccia basalt	47.40	48.92	N111764	1.52
			48.92	50.75	N111765	1.83
			50.75	52.27	N111766	1.52
			52.27	53.95	N111767	1.68
			53.95	55.17	N111768	1.22
			55.17	56.39	N111769	1.22
			56.39	57.91	N111770	1.52
			57.91	60.05	N111771	2.14
60.05	61.57	FBBS	60.05	61.57	N111772	1.52
		Fault breccia basalt				

From	To	Rocktype & Description	S_from	S_to	Sample	Width
61.57	61.57	EOH				

Project: 1642			Hole Number: IC96-32			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
Casing						
1.83	7.30	MSBS	1.83	3.66	N111773	1.83
Basalt rubble			3.66	5.49	N111774	1.83
7.30	9.35	MSBS				
Massive basalt						
9.35	10.60	GGBS				
Basalt gouge						
10.60	11.43	MSBS				
			5.49	8.23	N111775	0.00
			8.23	9.75	N111776	0.00
			9.75	12.80	N111777	0.00
Massive basalt						
11.43	17.37	MSBS	12.80	14.33	N111778	1.53
Massive basalt - rubbly core			14.33	15.85	N111779	1.52
			15.85	17.37	N111780	1.52
17.37	24.99	MSBS	17.37	18.90	N111781	1.53
Veined basalt			18.90	19.96	N111782	1.06
			19.96	21.49	N111783	1.53
			21.49	23.47	N111784	1.98
			23.47	24.99	N111785	1.52
24.99	27.30	BRBS	24.99	27.30	N111786	2.31
Breccia basalt						
27.30	30.10	MSBS	27.30	28.70	N111787	1.40
Massive basalt			28.70	30.10	N111788	1.40
30.10	30.50	HEMS	30.10	30.50	N111789	0.40
Hematitic mudstone						
30.50	35.66	BRBS	30.50	32.61	N111790	2.11
Breccia basalt			32.61	35.66	N111791	3.05
35.66	37.40	BRBS				
			35.66	37.95	N111792	0.00
Veined breccia basalt						
37.40	41.76	FBBS	37.95	40.23	N111793	2.28
Tectonic basalt breccia			40.23	41.76	N111794	1.53
41.76	47.20	BRBS	41.76	44.00	N111795	2.24
Breccia basalt			44.00	46.33	N111796	2.33
			46.33	49.38	N111797	0.00
47.20	55.47	BRBS	49.38	52.43	N111798	3.05
Veined and altered breccia basalt			52.43	53.95	N111799	1.52
			53.95	55.47	N111800	1.52

Project: 1642			*Hole Number:IC96-32*			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
55.47	55.47	EOH				

Project: 1642 **Hole Number: IC96-33**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.13	OBDH				
			1.83	3.66	N111801	0.00
Overburden - no core recovered						
2.13	22.50	MSBS	3.66	5.18	N111802	1.52
Massive Basalt			5.18	7.62	N111803	2.44
			7.62	8.53	N111804	0.91
			8.53	10.97	N111805	2.44
			10.97	13.26	N111806	2.29
			13.26	14.78	N111807	1.52
			14.78	15.85	N111808	1.07
			15.85	16.50	N111809	0.65
			16.50	17.37	N111810	0.87
			17.37	18.90	N111811	1.53
			18.90	20.42	N111812	1.52
			20.42	22.50	N111813	2.08
22.50	33.60	PHBS	22.50	24.99	N111814	2.49
Chlorite Porphyry Basalt			24.99	26.52	N111815	1.53
			26.52	28.04	N111816	1.52
			28.04	29.57	N111817	1.53
			29.57	30.78	N111818	1.21
33.60	50.80	BRBS				
Breccia Basalt - weal hematite						
50.80	56.08	FBBS				
Fault Breccia Basalt - with clay gouge/alteration						
56.08	56.08	EOH				

Project: 1642 **Hole Number: IC96-33**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.13	OBDH				
			1.83	3.66	N111801	0.00
		Overburden - no core recovered				
2.13	22.50	MSBS	3.66	5.18	N111802	1.52
		Massive Basalt	5.18	7.62	N111803	2.44
			7.62	8.53	N111804	0.91
			8.53	10.97	N111805	2.44
			10.97	13.26	N111806	2.29
			13.26	14.78	N111807	1.52
			14.78	15.85	N111808	1.07
			15.85	16.50	N111809	0.65
			16.50	17.37	N111810	0.87
			17.37	18.90	N111811	1.53
			18.90	20.42	N111812	1.52
			20.42	22.50	N111813	2.08
22.50	33.60	PHBS	22.50	24.99	N111814	2.49
		Chlorite Porphyry Basalt	24.99	26.52	N111815	1.53
			26.52	28.04	N111816	1.52
			28.04	29.57	N111817	1.53
			29.57	30.78	N111818	1.21
33.60	50.80	BRBS				
		Breccia Basalt - weal hematite				
50.80	56.08	FBBS				
		Fault Breccia Basalt - with clay gouge/alteration				
56.08	56.08	EOH				

Project: 1642 **Hole Number: IC96-34**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	3.65	MSBS				
		massive basalt				
3.65	4.10	HECH				
			1.83	4.27	N111851	0.00
		hematitic chert				
4.10	8.50	MSBS	4.27	5.79	N111852	1.52
		massive basalt				
8.50	13.22	HECH				
		hematitic chert				
13.22	15.25	MSBS				
		massive basalt				
15.25	16.15	HEMS				
			5.79	8.53	N111853	0.00
			8.53	13.41	N111854	0.00
			13.41	16.15	N111855	0.00
		hematitic mudstone				
16.15	71.00	MSBS	63.70	65.23	N111856	1.53
		masssive basalt	65.23	66.75	N111857	1.52
			66.75	68.25	N111858	1.50
			68.25	69.80	N111859	1.55
71.00	72.10	HECH				
		hematitic chert				
72.10	73.20	PYMS				
			69.80	72.10	N111860	0.00
			72.10	73.50	N111861	0.00
		massive sulfide with hematitic chert				
73.20	74.90	PYMS	73.50	74.70	N111862	1.20
			74.70	76.10	N111863	0.00
		massive pyrite				
74.90	77.90	PMMS	76.10	77.42	N111864	1.32
		massive sulfide with bornite				
77.90	79.35	PMMS				
		massive sulfide				
79.35	81.00	PMMS				
			77.42	78.94	N111865	0.00
			78.94	80.47	N111866	0.00
			80.47	81.99	N111867	0.00
		massive sulfide				

Project: 1642			Hole Number: IC96-34			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
81.00	92.60	PMMS	81.99	83.52	N111868	1.53
masive sulfides			83.52	85.04	N111869	1.52
			85.04	86.56	N111870	1.52
			86.56	88.09	N111871	1.53
			88.09	89.61	N111872	1.52
			89.61	91.14	N111873	1.53
92.60	92.93	HECH				
			91.14	92.66	N111874	0.00
			92.66	94.18	N111875	0.00
hematitic chert						
92.93	109.50	BRBS	94.18	95.71	N111876	1.53
porphyritic breccia basalt			95.71	97.23	N111877	1.52
			97.23	98.76	N111878	1.53
			98.76	100.89	N111879	2.13
109.50	114.91	MSBS				
massive basalt						
114.91	114.91	EOH				

Project: 1642 **Hole Number: IC97-35**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.66	CSDH				
		casing				
3.66	9.76	OBDH	3.66	5.79	N113196	2.13
		overburden	5.79	7.92	N113197	2.13
			7.92	8.38	N113198	0.46
			8.38	9.76	N113199	1.38
9.76	14.63	XXLI	9.76	10.97	N113200	1.21
		limonitic soil, minor incipient ferricrete	10.97	12.50	N113201	1.53
			12.50	13.41	N113202	0.91
			13.41	14.63	N113203	1.22
14.63	16.46	PYSG	14.63	15.96	N113204	1.33
		pyrite with basalt fragments	15.96	16.46	N113205	0.50
16.46	18.90	HEPY	16.46	17.37	N113206	0.91
		hematitic pyrite	17.37	18.90	N113207	1.53
18.90	23.70	SGBS	18.90	20.07	N113208	1.17
		weak stinger basalt	20.07	21.03	N113209	0.96
			21.03	22.56	N113210	1.53
			22.56	23.70	N113211	1.14
23.70	24.57	HEPY	23.70	24.57	N113212	0.87
		hematitic pyrite				
24.57	26.00	GGBS	24.57	26.00	N113213	1.43
		gouged basalt				
26.00	26.70	BRBS	26.00	26.70	N113214	0.70
		altered breecia basalt				
26.70	29.40	GGBS	26.70	27.58	N113215	0.88
		gouged breecia basalt	27.58	29.40	N113216	1.82
29.40	43.40	BRBS	29.40	30.61	N113217	1.21
		heavily fractured breecia basalt	30.61	31.70	N113218	1.09
43.40	45.72	FLBS				
		faulted massive basalt				
45.72	45.72	EOH				

Project: 1642			Hole Number: IC97-36			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	5.20	OBDH	1.83	5.20	N113220	3.37
overburden						
5.20	6.77	BRBS	5.20	6.25	N113221	1.05
extremely weathered breecia basalt			6.25	6.77	N113222	0.52
6.77	9.04	BRBS	6.77	7.62	N113223	0.85
weathered breecia basalt			7.62	9.04	N113224	1.42
9.04	11.58	GGBS	9.04	10.76	N113225	1.72
gouged breecia basalt			10.76	11.58	N113226	0.82
11.58	15.09	BRBS	11.58	12.80	N113227	1.22
weathered breecia basalt			12.80	14.33	N113228	1.53
			14.33	15.09	N113229	0.76
15.09	15.85	BRBS	15.09	15.85	N113230	0.76
very broken breecia basalt						
15.85	17.07	HEPY	15.85	17.07	N113231	1.22
extremely weathered hematitic pyrite						
17.07	18.17	BRBS	17.07	18.17	N113232	1.10
breecia basalt						
18.17	19.51	HEPY	18.17	19.51	N113233	1.34
strongly weathered and broken hematitic pyrite						
19.51	22.55	HEPY	19.51	21.04	N113234	1.53
hematitic pyrite			21.04	22.55	N113235	1.51
22.55	23.34	BRBS	22.55	23.34	N113236	0.79
broken breecia basalt						
23.34	23.84	HEPY	23.34	23.84	N113237	0.50
hematitic pyrite						
23.84	24.84	BRBS	23.84	24.84	N113238	1.00
breccia basalt						
24.84	25.32	HEPY	24.84	25.32	N113239	0.48
hematitic pyrite						
25.32	41.76	BRBS	25.32	26.52	N113240	1.20
heavily fractured breccia basalt			26.52	28.04	N113241	1.52
			28.04	29.26	N113242	1.22
41.76	41.76	EOH				

Project: 1642			Hole Number: IC97-37			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	6.40	OBDH	1.83	6.40	N113262	4.57
overburden						
6.40	10.36	BRBS	6.40	7.62	N113243	1.22
broken breccia basalt			7.62	8.84	N113244	1.22
			8.84	10.36	N113245	1.52
10.36	12.19	SGBS	10.36	11.30	N113246	0.94
stringer basalt			11.30	12.19	N113247	0.89
12.19	13.41	MSCH	12.19	13.41	N113248	1.22
red massive chert						
13.41	15.50	SGBS	13.41	14.74	N113249	1.33
very weathered stringer basalt			14.74	15.50	N113250	0.76
15.50	22.56	SGBS	15.50	16.46	N113251	0.96
stringer basalt			16.46	17.98	N113252	1.52
			17.98	19.51	N113253	1.53
			19.51	20.27	N113254	0.76
			20.27	22.56	N113255	2.29
22.56	28.65	BRBS	22.56	24.69	N113256	2.13
very broken breecia basalt			24.69	25.60	N113257	0.91
			25.60	28.65	N113258	3.05
28.65	32.82	BRBS	28.65	30.18	N113259	1.53
broken breccia basalt			30.18	31.70	N113260	1.52
			31.70	32.82	N113261	1.12
32.82	35.78	BRBS				
breecia basalt						
35.78	36.68	CAVN				
calcite vein						
36.68	39.93	MSBS				
massive basalt						
39.93	39.93	EOH				

Project: 1642			Hole Number: IC97-38			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	6.71	BRBS	1.83	6.71	N113263	4.88
broken breecia basalt						
6.71	10.36	XXLI	6.71	10.36	N113264	3.65
strongly limonitic rock with ferrcrete						
10.36	11.46	PYSG	10.36	11.46	N113265	1.10
very pyritic stringers						
11.46	15.83	HEPY	11.46	14.63	N113266	3.17
very altered hematitic pyrite			14.63	15.83	N113267	1.20
15.83	18.18	SGBS	15.83	17.23	N113268	1.40
stringer basalt with chert			17.23	18.18	N113269	0.95
18.18	19.94	SGBS	18.18	18.88	N113270	0.70
broken weak stringer basalt			18.88	19.94	N113271	1.06
19.94	21.03	BSPY	19.94	21.03	N113272	1.09
pyrite with basalt fragments						
21.03	24.23	HEPY	21.03	22.56	N113273	1.53
hematitic pyrite			22.56	24.23	N113274	1.67
24.23	25.90	BSPY	24.23	25.90	N113275	1.67
pyrite with basalt fragments						
25.90	27.13	BRBS	25.90	27.13	N113276	1.23
weakly gouged breccia basalt						
27.13	34.75	BRBS	27.13	28.65	N113277	1.52
fractured breecia basalt			28.65	29.57	N113278	0.92
34.75	34.75	EOH				

Project: 1642 **Hole Number: IC97-39**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	3.05	OBDH	1.83	3.05	N113279	1.22
overburden						
3.05	6.86	XXLI	3.05	3.81	N113280	0.76
ferricrete breccia			3.81	5.33	N113281	1.52
			5.33	6.89	N113282	0.00
6.86	7.72	BRBS	6.89	7.72	N113283	0.83
broken breecia basalt						
7.72	11.11	GGBS	7.72	9.75	N113284	2.03
gouged basalt			9.75	11.11	N113285	1.36
11.11	13.41	GGBS	11.11	11.89	N113286	0.78
strongly limonitic gouged basalt			11.89	13.41	N113287	1.52
13.41	21.67	GGBS	13.41	14.63	N113288	1.22
chloritized gouged basalt			14.63	17.07	N113289	2.44
			17.07	18.55	N113290	1.48
			18.55	21.67	N113291	3.12
21.67	31.70	BRBS	21.67	22.80	N113292	1.13
breecia basalt			22.80	23.47	N113293	0.67
31.70	31.70	EOH				

Project: 1642 | **Hole Number: IC97-40**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	1.34	OBDH	1.22	1.34	N113303	0.12
		overburden				
1.34	3.51	BRBS	1.34	2.13	N113304	0.79
		very broken breecia basalt	2.13	3.51	N113305	1.38
3.51	14.17	BRBS	3.51	4.27	N113306	0.76
		broken breecia basalt	4.27	8.84	N113307	4.57
			8.84	10.36	N113308	1.52
			10.36	11.28	N113309	0.92
			11.28	12.65	N113310	1.37
			12.65	13.41	N113311	0.76
			13.41	14.17	N113312	0.76
14.17	21.56	BRBS	14.17	15.85	N113313	1.68
		broken breecia basalt with cuprite	15.85	17.07	N113314	1.22
			17.07	18.59	N113315	1.52
			18.59	19.81	N113316	1.22
			19.81	20.80	N113317	0.99
			20.80	21.56	N113318	0.76
21.56	22.56	BRBS	21.56	22.56	N113319	1.00
		altered breecia basalt				
22.56	35.36	BRBS	22.56	24.08	N113320	1.52
		fractured breecia basalt	24.08	24.80	N113321	0.72
35.36	35.36	EOH				

Project: 1642 **Hole Number: IC97-41**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	1.42	OBDH	1.22	1.42	N113322	0.20
		overburden				
1.42	5.75	BRBS	1.42	2.44	N113323	1.02
		breecia basalt	2.44	3.66	N113324	1.22
			3.66	4.57	N113325	0.91
			4.57	5.75	N113337	1.18
5.75	10.82	BRBS	5.75	6.71	N113326	0.96
		broken breecia basalt	6.71	8.38	N113327	1.67
			8.38	9.60	N113328	1.22
			9.60	10.82	N113329	1.22
10.82	14.38	BRBS	10.82	12.34	N113330	1.52
		breecia basalt	12.34	13.41	N113331	1.07
			13.41	14.38	N113332	0.97
14.38	16.07	FLBS	14.38	14.94	N113333	0.56
		faulted basalt with malachite	14.94	16.07	N113334	1.13
16.07	35.97	BRBS	16.07	17.12	N113335	1.05
		breecia basalt	17.12	17.98	N113336	0.86
35.97	35.97	EOH				

Project: 1642			Hole Number: IC97-42			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	2.16	OBDH	1.83	2.16	113338	0.33
overburden						
2.16	4.27	BRBS	2.16	3.10	113339	0.94
broken breecia basalt			3.10	4.27	113340	1.17
4.27	15.24	BRBS	4.27	5.49	113341	1.22
breecia basalt						
15.24	15.24	EOH				

Project: 1642 **Hole Number: IC97-43**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	4.37	OBDH	2.44	4.37	N113342	1.93
overburden						
4.37	27.40	RBCH	4.37	5.49	N113343	1.12
grey ribbon chert			5.49	6.30	N113344	0.81
			6.30	7.32	N113345	1.02
			7.32	8.53	N113346	1.21
			8.53	10.06	N113347	1.53
			10.06	11.28	N113348	1.22
			11.28	12.50	N113349	1.22
			12.50	13.11	N113350	0.61
			13.11	14.48	N113351	1.37
			14.48	15.09	N113352	0.61
			15.09	16.46	N113353	1.37
			16.46	17.98	N113354	1.52
			17.98	19.51	N113355	1.53
			19.51	21.03	N113356	1.52
			21.03	22.56	N113357	1.53
			22.56	23.47	N113358	0.91
			23.47	24.54	N113359	1.07
			24.54	25.91	N113360	1.37
			25.91	27.40	N113361	1.49
27.40	29.72	GGMS	27.40	28.65	N113362	1.25
gouged mudstone			28.65	29.72	N113363	1.07
29.72	37.80	RBCH	29.72	30.48	N113364	0.76
grey ribbon chert			30.48	32.00	N113365	1.52
			32.00	32.92	N113366	0.92
			32.92	33.82	N113367	0.90
			33.82	35.05	N113368	1.23
			35.05	36.58	N113369	1.53
			36.58	37.80	N113370	1.22
37.80	37.80	EOH				

Project: 1642 | **Hole Number: IC97-44**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
0						
3.05	7.58	MSBS				
		massive basalt				
7.58	26.15	BRBS				
		breccia basalt				
26.15	31.80	BRBS				
		epidote altered breccia basalt				
31.80	37.03	BRBS				
		porphyrytic breccia basalt				
37.03	39.55	BRBS				
		fractured breccia basalt				
39.55	47.60	BRBS				
		weakly porphyrytic breccia basalt				
47.60	67.30	BRBS				
		breccia basalt with hematitic matrix				
67.30	74.07	BRBS				
		breccia basalt				
74.07	75.15	BRBS?				
		altered basalt				
75.15	83.10	MSCG				
		carbonaceous conglomerate mudstone				
83.10	84.28	BRBS?				
		altered basalt				
84.28	95.71	MSCG				
		carbonaceous conglomerate mudstone				
95.71	97.50	BRBS?				
		altered basalt				
97.50	122.15	BRBS				
		breccia basalt				
122.15	131.98	BRBS				
		porphyrytic breccia basalt				
131.98	132.68	CAVN				
		carbonate vein				
132.68	147.52	BRBS				
		porphyrytic breccia basalt				
147.52	164.13	BRBS				
		breccia basalt				
164.13	164.13	EOH				

Project: 1642 **Hole Number: IC97-45**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing						
3.05	8.84	MSBS				
massive basalt						
8.84	29.40	BRBS				
breccia basalt with spherulites						
29.40	57.06	BRBS				
breccia basalt						
57.06	64.10	BRBS				
breccia basalt with hematitic matrix						
64.10	77.25	BRBS				
weakly porphyrytic breccia basalt						
77.25	77.95	BRBS				
altered breccia basalt						
77.95	82.35	MSCG				
carbonaceous conglomerate mudstone						
82.35	83.10	BRBS?				
altered breccia basalt						
83.10	86.30	MSCG				
carbonaceous conglomerate mudstone						
86.30	91.10	RBCH				
ribbon bedded chert						
91.10	92.50	RBCH				
ribbon bedded chert interbedded with mudstone						
92.50	94.35	BRBS?				
altered basalt interbedded with cong. mudstone						
94.35	103.17	BRBS				
altered breccia basalt						
103.17	110.95	BRBS				
weakly porphyrytic breccia basalt						
110.95	110.95	EOH				

Project: 1642 **Hole Number: IC97-46**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	16.15	OBDH	14.33	15.24	N113487	0.91
		overburden	15.24	16.15	N113488	0.91
16.15	19.26	OBDH	16.15	17.98	N113489	1.83
		basalt pebbles	17.98	19.26	N113490	1.28
19.26	26.12	PYMS	19.26	21.34	N113491	2.08
		massive sulphides	21.34	22.56	N113492	1.22
			22.56	23.47	N113493	0.91
			23.47	24.38	N113494	0.91
			24.38	25.76	N113495	1.38
			25.76	26.12	N113496	0.36
26.12	30.43	PHBS	26.12	27.53	N113497	1.41
		altered porphyritic basalt	27.53	28.42	N113498	0.89
			28.42	30.43	N113499	2.01
30.43	35.66	PYMS	30.43	32.00	N113500	1.57
		massive sulphides	32.00	33.53	N113501	1.53
			33.53	34.75	N113502	1.22
			34.75	35.66	N113503	0.91
35.66	36.88	BRBS	35.66	36.88	N113504	1.22
		altered breccia basalt				
36.88	42.37	BRBS	36.88	38.40	N113505	1.52
		breccia basalt	38.40	39.93	N113506	1.53
			39.93	41.30	N113507	1.37
			41.30	42.37	N113508	1.07
42.37	44.35	FLBS	42.37	43.59	N113509	1.22
		faulted breccia basalt	43.59	44.35	N113510	0.76
44.35	46.94	BRBS	44.35	45.87	N113511	1.52
		fractured breccia basalt	45.87	46.94	N113512	1.07
46.94	46.94	EOH				

Project: 1642			Hole Number: IC97-47			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	7.62	OBDH	3.96	7.62	N113528	3.66
overburden						
7.62	10.66	BRBS	7.62	9.14	N113529	1.52
breccia basalt			9.14	10.66	N113530	1.52
10.66	11.32	BRBS	10.66	11.32	N113531	0.66
breccia basalt						
11.32	15.09	BRBS	11.32	12.75	N113532	1.43
breccia basalt with cuprite			12.75	13.81	N113533	1.06
			13.81	15.09	N113534	1.28
15.09	17.68	FLBS	15.09	17.07	N113535	1.98
faulted breccia basalt with cuprite			17.07	17.68	N113536	0.61
17.68	26.82	PHBS	17.68	18.90	N113537	1.22
fractured porphyritic basalt with cuprite			18.90	20.42	N113538	1.52
			20.42	21.64	N113539	1.22
			21.64	23.16	N113540	1.52
			23.16	24.69	N113541	1.53
			24.69	26.21	N113542	1.52
			26.21	26.82	N113543	0.61
26.82	28.76	PHBS	26.82	27.74	N113544	0.92
porphyritic breccia basalt			27.74	28.76	N113545	1.02
28.76	33.83	BRBS	28.76	30.02	N113546	1.26
breccia basalt						
33.83	33.83	EOH				

Project: 1642 **Hole Number:IC97-48**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	3.66	OBDH				
overburden						
3.66	9.84	BRBS	3.66	8.23	N113553	4.57
stongly limonitized breccia basalt			8.23	9.84	N113554	1.61
9.84	12.34	PHBS	9.84	10.97	N113555	1.13
limonitized porphyritic basalt			10.97	12.34	N113556	1.37
12.34	16.96	PHBS	12.34	14.02	N113557	1.68
porphyritic basalt with malachite			14.02	15.07	N113558	1.05
			15.07	16.96	N113559	1.89
16.96	20.00	PHBS	16.96	18.59	N113560	1.63
porphyritic basalt with cuprite			18.59	20.00	N113561	1.41
20.00	31.70	BRBS	20.00	20.73	N113562	0.73
breccia basalt			20.73	21.95	N113563	1.22
			21.95	23.32	N113564	1.37
			23.32	24.69	N113565	1.37
			24.69	26.21	N113566	1.52
			26.21	27.32	N113567	1.11
			27.32	28.04	N113568	0.72
			28.04	29.26	N113569	1.22
			29.26	30.78	N113570	1.52
			30.78	31.70	N113571	0.92
31.70	32.31	BRBS				
breccia basalt						
32.31	32.31	EOH				

Project: 1642			Hole Number: IC97-49			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	10.97	OBDH				
overburden						
10.97	11.52	PHBS	10.97	11.52	N113609	0.55
strongly limonitized porphyritic basalt						
11.52	13.18	HEPY	11.52	12.60	N113610	1.08
hematitic pyrite			12.60	13.18	N113611	0.58
13.18	17.85	SSSG	13.18	14.33	N113612	1.15
limonitized stringer sulphides			14.33	15.54	N113613	1.21
			15.54	17.07	N113614	1.53
			17.07	17.85	N113615	0.78
17.85	20.27	GGBS	17.85	18.75	N113616	0.90
gouged basalt			18.75	20.27	N113617	1.52
20.27	26.21	PHBS	20.27	21.95	N113618	1.68
porphyritic breccia basalt			21.95	22.86	N113619	0.91
			22.86	24.38	N113620	1.52
			24.38	25.30	N113621	0.92
			25.30	26.21	N113622	0.91
26.21	29.26	SGBS	26.21	27.73	N113623	1.52
weak stringer sulphides			27.73	29.26	N113624	1.53
29.26	29.26	EOH				

Project: 1642 **Hole Number: IC97-50**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	6.71	CSDH *casing*				
6.71	7.00	OBDH *overburden*				
7.00	8.38	BRBS *limonitized breccia basalt*	7.00	8.38	N113625	1.38
8.38	11.80	PHBS *prophyritic basalt*	8.38	9.75	N113626	1.37
			9.75	10.97	N113627	1.22
			10.97	11.80	N113628	0.83
11.80	13.37	PHBS *prophyritic basalt*	11.80	13.37	N113629	1.57
13.37	16.72	PHBS *prophyritic basalt with malachite*	13.37	14.93	N113630	1.56
			14.93	15.85	N113631	0.92
			15.85	16.72	N113632	0.87
16.72	18.90	PHBS *prophyritic basalt with cuprite*	16.72	18.29	N113640	1.57
			18.29	18.90	N113641	0.61
18.90	29.57	BRBS *breccia basalt*	18.90	20.42	N113633	1.52
			20.42	21.95	N113634	1.53
			21.95	23.47	N113635	1.52
			23.47	25.00	N113636	1.53
			25.00	26.52	N113637	1.52
			26.52	28.04	N113638	1.52
			28.04	29.57	N113639	1.53
29.57	34.14	BRBS *breccia basalt*				
34.14	34.14	EOH				

Project: 1642 **Hole Number: IC97-51**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	3.35	OBDH				
overburden						
3.35	11.30	PHBS	3.35	5.18	N113642	1.83
porphyritic basalt with malachite			5.18	6.25	N113643	1.07
			6.25	7.16	N113644	0.91
			7.16	8.67	N113645	1.51
			8.67	9.82	N113646	1.15
			9.82	11.30	N113647	1.48
11.30	13.11	PHBS	11.30	12.65	N113648	1.35
porphyritic basalt with cuprite			12.65	13.11	N113649	0.46
13.11	18.07	BRBS	13.11	14.02	N113650	0.91
breccia basalt with weak cuprite			14.02	14.94	N113651	0.92
			14.94	15.85	N113652	0.91
			15.85	17.07	N113653	1.22
			17.07	18.07	N113654	1.00
18.07	23.82	BRBS	18.07	18.75	N113655	0.68
breccia basalt			18.75	20.12	N113656	1.37
			20.12	21.64	N113657	1.52
			21.64	22.56	N113658	0.92
			22.56	23.82	N113659	1.26
23.82	25.60	BRBS	23.82	25.60	N113660	1.78
broken breccia basalt						
25.60	29.57	BRBS	25.60	27.13	N113661	1.53
breccia basalt						
29.57	29.57	EOH				

Project: 1642 **Hole Number: IC97-51**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	3.35	OBDH				
overburden						
3.35	11.30	PHBS	3.35	5.18	N113642	1.83
porphyritic basalt with malachite			5.18	6.25	N113643	1.07
			6.25	7.16	N113644	0.91
			7.16	8.67	N113645	1.51
			8.67	9.82	N113646	1.15
			9.82	11.30	N113647	1.48
11.30	13.11	PHBS	11.30	12.65	N113648	1.35
porphyritic basalt with cuprite			12.65	13.11	N113649	0.46
13.11	18.07	BRBS	13.11	14.02	N113650	0.91
breccia basalt with weak cuprite			14.02	14.94	N113651	0.92
			14.94	15.85	N113652	0.91
			15.85	17.07	N113653	1.22
			17.07	18.07	N113654	1.00
18.07	23.82	BRBS	18.07	18.75	N113655	0.68
breccia basalt			18.75	20.12	N113656	1.37
			20.12	21.64	N113657	1.52
			21.64	22.56	N113658	0.92
			22.56	23.82	N113659	1.26
23.82	25.60	BRBS	23.82	25.60	N113660	1.78
broken breccia basalt						
25.60	29.57	BRBS	25.60	27.13	N113661	1.53
breccia basalt						
29.57	29.57	EOH				

Project: 1642 **Hole Number: IC97-52**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	3.03	OBDH				
overburden						
3.03	21.20	BRBS	3.03	3.66	N113756	0.63
breccia basalt			3.66	5.18	N113757	1.52
			5.18	6.71	N113758	1.53
			6.71	7.77	N113759	1.06
			7.77	9.30	N113760	1.53
			9.30	10.52	N113761	1.22
			10.52	12.04	N113762	1.52
			12.04	13.41	N113763	1.37
			13.41	14.94	N113764	1.53
			14.94	16.15	N113765	1.21
			16.15	17.68	N113766	1.53
			17.68	18.29	N113767	0.61
			18.29	19.81	N113768	1.52
			19.81	21.20	N113769	1.39
21.20	23.70	PHBS	21.20	22.65	N113770	1.45
porphyritic basalt with mod. malachite			22.65	23.70	N113771	1.05
23.70	27.02	PHBS	23.70	25.48	N113772	1.78
porphyritic basalt			25.48	27.02	N113773	1.54
27.02	28.00	GGBS	27.02	28.00	N113774	0.98
gouged porphyritic basalt						
28.00	30.30	PHBS	28.00	29.42	N113775	1.42
porphyritic basalt			29.42	30.30	N113776	0.88
30.30	31.65	PHBS	30.30	31.65	N113777	1.35
limonitized porphyritic basalt						
31.65	33.50	BRBS	31.65	32.61	N113778	0.96
breccia basalt			32.61	33.50	N113779	0.89
33.50	34.13	BRBS	33.50	34.13	N113780	0.63
breccia basalt						
34.13	34.13	EOH				

Project: 1642 **Hole Number: IC97-52**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
		casing				
2.44	3.03	OBDH				
		overburden				
3.03	21.20	BRBS	3.03	3.66	N113756	0.63
		breccia basalt	3.66	5.18	N113757	1.52
			5.18	6.71	N113758	1.53
			6.71	7.77	N113759	1.06
			7.77	9.30	N113760	1.53
			9.30	10.52	N113761	1.22
			10.52	12.04	N113762	1.52
			12.04	13.41	N113763	1.37
			13.41	14.94	N113764	1.53
			14.94	16.15	N113765	1.21
			16.15	17.68	N113766	1.53
			17.68	18.29	N113767	0.61
			18.29	19.81	N113768	1.52
			19.81	21.20	N113769	1.39
21.20	23.70	PHBS	21.20	22.65	N113770	1.45
		porphyritic basalt with mod. malachite	22.65	23.70	N113771	1.05
23.70	27.02	PHBS	23.70	25.48	N113772	1.78
		porphyritic basalt	25.48	27.02	N113773	1.54
27.02	28.00	GGBS	27.02	28.00	N113774	0.98
		gouged porphyritic basalt				
28.00	30.30	PHBS	28.00	29.42	N113775	1.42
		porphyritic basalt	29.42	30.30	N113776	0.88
30.30	31.65	PHBS	30.30	31.65	N113777	1.35
		limonitized porphyritic basalt				
31.65	33.50	BRBS	31.65	32.61	N113778	0.96
		breccia basalt	32.61	33.50	N113779	0.89
33.50	34.13	BRBS	33.50	34.13	N113780	0.63
		breccia basalt				
34.13	34.13	EOH				

Project: 1642 **Hole Number: IC97-53**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.00	OBDH				
overburden						
2.00	2.44	BRBS				
breccia basalt						
2.44	3.66	BRBS	2.44	3.66	N113781	1.22
limonitized breccia basalt						
3.66	5.64	BRBS	3.66	5.64	N113782	1.98
breccia basalt						
5.64	12.05	BRBS	5.64	7.62	N113783	1.98
limonitized breccia basalt			7.62	8.84	N113784	1.22
			8.84	10.50	N113785	1.66
			10.50	12.05	N113786	1.55
12.05	19.20	BRBS	12.05	13.87	N113787	1.82
breccia basalt			13.87	15.39	N113788	1.52
			15.39	17.20	N113789	1.81
			17.20	19.20	N113790	2.00
19.20	23.00	GGBS	19.20	21.03	N113791	1.83
gouged breccia basalt with malachite			21.03	23.00	N113792	1.97
23.00	24.20	GGBS	23.00	24.20	N113793	1.20
gouged breccia basalt						
24.20	34.60	BRBS	24.20	25.30	N113794	1.10
breccia basalt			25.30	26.82	N113795	1.52
			26.82	28.42	N113796	1.60
			28.42	30.02	N113797	1.60
			30.02	31.42	N113798	1.40
			31.42	32.77	N113799	1.35
			32.77	34.60	N113800	1.83
34.60	37.19	GGBS	34.60	36.42	N113801	1.82
gouged and altered breccia basalt						
37.19	37.19	EOH				

Project: 1642			Hole Number: IC97-54			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05 CSDH					
casing						
3.05	3.60 OBDH					
overburden						
3.60	12.80 BRBS		3.60	5.48	N113802	1.88
breccia basalt			5.48	7.31	N113803	1.83
			7.31	8.83	N113804	1.52
			8.83	9.90	N113805	1.07
			9.90	11.43	N113806	1.53
			11.43	12.80	N113807	1.37
12.80	15.84 RBCH		12.80	14.32	N113808	1.52
ribbon bedded chert			14.32	15.84	N113809	1.52
15.84	17.19 BRBS		15.84	17.19	N113810	1.35
breccia basalt						
17.19	34.13 RBCH		17.19	18.59	N113811	1.40
ribbon bedded chert			18.59	20.11	N113812	1.52
34.13	34.13 EOH					

Project: 1642 **Hole Number: IC97-55**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
		casing				
3.05	3.65	OBDH				
		overburden				
3.65	4.57	PHBS	3.65	4.57	N113722	0.92
		porphyritic basalt				
4.57	7.03	PHBS	4.57	7.03	N113723	2.46
		decomposed porphyritic basalt				
7.03	12.03	PHBS	7.03	8.07	N113724	1.04
		brecciated porphyritic basalt	8.07	8.83	N113725	0.76
			8.83	10.05	N113726	1.22
			10.05	11.27	N113727	1.22
			11.27	12.03	N113728	0.76
12.03	16.30	PHBS	12.03	13.71	N113729	1.68
		weakly brecciated porphyritic basalt	13.71	14.78	N113730	1.07
			14.78	16.30	N113731	1.52
16.30	17.25	SHBS	16.30	17.25	N113732	0.95
		sheared porphyritic basalt				
17.25	21.37	PHBS	17.25	17.83	N113733	0.58
		brecciated porphyritic basalt	17.83	18.89	N113734	1.06
			18.89	20.42	N113735	1.53
			20.42	21.37	N113736	0.95
21.37	22.24	SHBS	21.37	22.24	N113737	0.87
		sheared porphyritic basalt				
22.24	23.98	SSSG	22.24	23.46	N113738	1.22
		stringer sulphides	23.46	23.98	N113739	0.52
23.98	25.29	BRBS	23.98	25.29	N113740	1.31
		breccia basalt				
25.29	28.80	BRBS	25.29	25.90	N113741	0.61
		breccia basalt				
28.80	32.20	BRBS				
		breccia basalt				
32.20	35.70	FBBS				
		faulted breccia basalt				
35.70	35.96	BRBS				
		breccia basalt				
35.96	35.96	EOH				

Project: 1642 **Hole Number: IC97-56**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	9.90	PHBS	1.22	2.43	N113813	1.21
		porphyritic basalt	2.43	4.26	N113814	1.83
			4.26	5.79	N113815	1.53
			5.79	7.76	N113816	1.97
			7.76	9.90	N113817	2.14
9.90	16.65	GGBS	9.90	11.89	N113818	1.99
		tectonized porphyritic basalt	11.89	13.41	N113819	1.52
			13.41	14.94	N113820	1.53
			14.94	16.65	N113821	1.71
16.65	17.98	PHBS	16.65	17.98	N113822	1.33
		porphyritic basalt				
17.98	22.45	PHBS	17.98	19.51	N113823	1.53
		limonitic porphyritic basalt	19.51	21.03	N113824	1.52
			21.03	22.45	N113825	1.42
22.45	34.90	PHBS	22.45	24.08	N113826	1.63
		porphyritic basalt	24.08	25.60	N113827	1.52
			25.60	27.13	N113828	1.53
			27.13	28.65	N113829	1.52
			28.65	30.15	N113830	1.50
			30.15	31.70	N113831	1.55
			31.70	33.22	N113832	1.52
			33.22	34.90	N113833	1.68
34.90	38.45	BSPY	34.90	36.50	N113834	1.60
		pyrite with basalt fragments	36.50	38.45	N113835	1.95
38.45	62.80	BRBS	38.45	40.39	N113836	1.94
		aphanitic breccia basalt	40.39	42.15	N113837	1.76
			42.15	43.89	N113838	1.74
			43.89	45.42	N113839	1.53
			45.42	46.94	N113840	1.52
			46.94	48.46	N113841	1.52
			48.46	49.99	N113842	1.53
			49.99	51.51	N113843	1.52
			51.51	53.04	N113844	1.53
			53.04	54.56	N113845	1.52
			54.56	56.08	N113846	1.52
			56.08	57.40	N113847	1.32
			57.40	58.67	N113848	1.27
			58.67	60.20	N113849	1.53

Project: 1642			Hole Number: IC97-56			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			60.20	61.57	N113850	1.37
			61.57	62.80	N113851	1.23
62.80	77.11	BRBS	62.80	64.31	N113852	1.51
faulted breccia basalt			64.31	65.23	N113853	0.92
			65.23	66.75	N113854	1.52
			66.75	68.30	N113855	1.55
			68.30	69.80	N113856	1.50
			69.80	71.30	N113857	1.50
			71.30	72.85	N113858	1.55
			72.85	74.37	N113859	1.52
			74.37	75.74	N113860	1.37
			75.74	77.11	N113861	1.37
77.11	77.11	EOH				

Project: 1642 **Hole Number: IC97-57**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.30	CSDH				
		casing				
3.30	11.12	OBDH	9.75	11.12	N113862	1.37
		overburden				
11.12	12.00	XXLI	11.12	12.00	N113863	0.88
		limonitic sand				
12.00	13.25	PYMS	12.00	13.25	N113864	1.25
		sulphide mud				
13.25	16.50	PYMS	13.25	14.80	N113865	1.55
		broken massive sulphides	14.80	16.50	N113866	1.70
16.50	20.80	PYMS	16.50	18.29	N113867	1.79
		massive sulphides	18.29	19.81	N113868	1.52
			19.81	20.80	N113869	0.99
20.80	22.90	PHBS	20.80	22.10	N113870	1.30
		sulphide rich massive basalt	22.10	22.90	N113871	0.80
22.90	26.35	PHBS	22.90	24.84	N113872	1.94
		porphyritic basalt	24.84	26.35	N113873	1.51
26.35	28.25	PHBS	26.35	28.25	N113874	1.90
		tectonized porphyritic basalt				
28.25	30.48	HEPY	28.25	29.35	N113875	1.10
		tectonized hematitic pyrite	29.35	30.48	N113876	1.13
30.48	40.50	FBBS	30.48	31.70	N113877	1.22
		fault breccia	31.70	32.92	N113878	1.22
			32.92	34.14	N113879	1.22
			34.14	35.66	N113880	1.52
			35.66	37.19	N113881	1.53
			37.19	38.70	N113882	1.51
			38.70	40.50	N113883	1.80
40.50	41.76	BRBS	40.50	41.76	N113884	1.26
		breccia basalt				
41.76	41.76	EOH				

Project: 1642			Hole Number:IC97-58			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.00	BRBS	1.22	2.00	N113742	0.78
broken breccia basalt						
2.00	3.45	BRBS	2.00	3.45	N113743	1.45
limonitized breccia basalt						
3.45	11.70	BRBS	3.45	4.85	N113744	1.40
broken breccia basalt			4.85	6.10	N113745	1.25
			6.10	7.01	N113746	0.91
			7.01	8.69	N113747	1.68
			8.69	10.21	N113748	1.52
			10.21	11.70	N113749	1.49
11.70	21.86	BRBS	11.70	13.11	N113750	1.41
breccia basalt			13.11	14.63	N113901	1.52
			14.63	16.15	N113902	1.52
			16.15	17.66	N113903	1.51
			17.66	19.35	N113904	1.69
			19.35	20.88	N113905	1.53
			20.88	21.86	N113906	0.98
21.86	23.47	BRBS	21.86	23.47	N113907	1.61
broken breccia basalt						
23.47	38.40	BRBS	23.47	24.99	N113908	1.52
breccia basalt			24.99	25.60	N113909	0.61
			25.60	27.13	N113910	1.53
			27.13	28.65	N113911	1.52
			28.65	29.41	N113912	0.76
			29.41	30.78	N113913	1.37
			30.78	32.31	N113914	1.53
			32.31	33.83	N113915	1.52
			33.83	35.36	N113916	1.53
			35.36	36.88	N113917	1.52
			36.88	38.40	N113918	1.52
38.40	39.93	BRBS				
breccia basalt						
39.93	39.93	EOH				

Project: 1642 **Hole Number: IC97-59**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing						
3.05	3.30	OBDH				
overburden						
3.30	4.27	BRBS	3.30	4.27	N113976	0.97
strongly limonitized breccia basalt						
4.27	8.80	BRBS	4.27	5.79	N113977	1.52
breccia basalt			5.79	7.31	N113978	1.52
			7.31	8.80	N113979	1.49
8.80	12.28	BRBS	8.80	10.06	N113980	1.26
breccia basalt			10.06	11.58	N113981	1.52
			11.58	12.28	N113982	0.70
12.28	15.76	BRBS	12.28	13.11	N113983	0.83
breccia basalt			13.11	14.63	N113984	1.52
			14.63	15.76	N113985	1.13
15.76	16.70	GGBS	15.76	16.70	N113986	0.94
gouged breccia basalt						
16.70	19.15	BRBS	16.70	17.68	N113987	0.98
breccia basalt			17.68	19.15	N113988	1.47
19.15	20.24	BRBS	19.15	20.24	N113989	1.09
weakly tectonized breccia basalt						
20.24	29.26	BRBS	20.24	21.03	N113990	0.79
breccia basalt			21.03	22.25	N113991	1.22
			22.25	22.86	N113992	0.61
			22.86	24.08	N113993	1.22
			24.08	25.60	N113994	1.52
			25.60	27.13	N113995	1.53
			27.13	28.35	N113996	1.22
			28.35	29.26	N113997	0.91
29.26	39.32	SGBS	29.26	30.78	N113998	1.52
stringer basalt			30.78	31.70	N113999	0.92
			31.70	33.22	N114000	1.52
			33.22	34.75	N114001	1.53
			34.75	36.27	N114002	1.52
			36.27	37.80	N114003	1.53
			37.80	39.32	N114004	1.52
39.32	39.32	EOH				

Project: 1642 **Hole Number: IC97-60**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	2.09	OBDH				
		overburden				
2.09	4.71	BRBS	2.09	3.05	N114005	0.96
		breccia basalt	3.05	4.27	N114006	1.22
			4.27	4.71	N114007	0.44
4.71	6.50	BRBS	4.71	5.39	N114008	0.68
		breccia basalt	5.39	6.50	N114009	1.11
6.50	8.83	BRBS	6.50	7.31	N114010	0.81
		breccia basalt	7.31	8.83	N114011	1.52
8.83	11.88	BRBS	8.83	10.36	N114012	1.53
		heavily weathered breccia basalt	10.36	11.88	N114013	1.52
11.88	14.44	BRBS	11.88	13.41	N114014	1.53
		breccia basalt	13.41	14.44	N114015	1.03
14.44	22.56	BRBS	14.44	15.39	N114016	0.95
		breccia basalt	15.39	16.46	N114017	1.07
			16.46	17.98	N114018	1.52
			17.98	19.51	N114019	1.53
			19.51	21.03	N114020	1.52
			21.03	22.56	N114021	1.53
22.56	33.30	SGBS	22.56	23.77	N114022	1.21
		very weak stringer sulphides	23.77	25.30	N114023	1.53
			25.30	26.43	N114024	1.13
			26.43	27.13	N114025	0.70
			27.13	28.65	N114026	1.52
			28.65	30.18	N114027	1.53
			30.18	31.70	N114028	1.52
			31.70	33.30	N114029	1.60
33.30	40.91	BRBS	33.30	34.44	N114030	1.14
		breccia basalt	34.44	35.97	N114031	1.53
			35.97	37.49	N114032	1.52
			37.49	38.25	N114033	0.76
			38.25	39.78	N114034	1.53
			39.78	40.91	N114038	1.13
40.91	44.65	SSSG	40.91	42.37	N114035	1.46
		stringer sulphides	42.37	43.89	N114036	1.52
			43.89	44.65	N114037	0.76
44.65	51.51	BRBS	44.65	45.42	N114039	0.77
		breccia basalt	45.42	46.94	N114040	1.52

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			46.94	48.16	N114041	1.22
			48.16	49.07	N114042	0.91
			49.07	49.99	N114043	0.92
51.51	53.64	BRBS				
		breccia basalt				
53.64	53.64	EOH				

Project: 1642 **Hole Number: IC97-61**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	1.62	OBDH				
overburden						
1.62	15.09	BRBS	1.62	3.51	N114044	1.89
breccia basalt			3.51	4.42	N114045	0.91
			4.42	5.94	N114046	1.52
			5.94	6.71	N114047	0.77
			6.71	8.23	N114048	1.52
			8.23	9.14	N114049	0.91
			9.14	10.82	N114050	1.68
			10.82	12.04	N114051	1.22
			12.04	13.56	N114052	1.52
			13.56	15.09	N114053	1.53
15.09	40.84	BRBS				
breccia basalt						
40.84	40.84	EOH				

Project: 1642 **Hole Number: IC97-62**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	2.74	OBDH				
		overburden				
2.74	13.41	MSBS	2.74	4.27	N114201	1.53
		oxidized massive basalt	4.27	5.18	N114202	0.91
			5.18	6.40	N114203	1.22
			6.40	7.32	N114204	0.92
			7.32	8.38	N114205	1.06
			8.38	9.75	N114206	1.37
			9.75	11.28	N114207	1.53
			11.28	12.19	N114208	0.91
			12.19	13.41	N114209	1.22
13.41	19.20	MSBS	13.41	14.63	N114210	1.22
		heavily fractures massive basalt	14.63	16.13	N114211	1.50
			16.13	17.68	N114212	1.55
			17.68	19.20	N114213	1.52
19.20	22.76	XXLI	19.20	20.73	N114214	1.53
		limonitic soil	20.73	22.25	N999001	1.52
			22.25	22.76	N114215	0.51
22.76	28.65	PHBS	22.76	24.08	N114216	1.32
		porphyritic basalt	24.08	25.60	N114217	1.52
			25.60	27.13	N114218	1.53
			27.13	28.65	N114219	1.52
28.65	30.79	PHBS	28.65	30.02	N114220	1.37
		porphyritic basalt	30.02	30.79	N114221	0.77
30.79	36.27	PHBS	30.79	31.55	N114222	0.76
		broken porphyritic basalt	31.55	32.61	N114223	1.06
			32.61	33.22	N114224	0.61
			33.22	34.75	N114225	1.53
			34.75	36.27	N114226	1.52
36.27	51.51	PHBS	36.27	37.80	N114227	1.53
		brecciated porphyritic basalt	37.80	39.32	N114228	1.52
			39.32	40.84	N114229	1.52
			40.84	42.37	N114230	1.53
			42.37	43.89	N114231	1.52
			43.89	45.42	N114232	1.53
			45.42	46.94	N114233	1.52
			46.94	48.46	N114234	1.52
			48.46	49.99	N114235	1.53

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			49.99	51.51	N114236	1.52
51.51	**64.45**	**BRBS**				
breccia basalt						
64.45	**66.75**	**BRBS**				
veined breccia basalt						
66.75	**73.75**	**FLBS**				
fault breccia basalt						
73.75	**75.38**	**BRBS**				
breccia basalt						
75.38	**78.64**	**BRBS**				
broken breccia basalt						
78.64	**80.47**	**BRBS**				
breccia basalt						
80.47	**80.47**	**EOH**				

Project: 1642 **Hole Number: IC97-63**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	1.83	OBDH				
overburden						
1.83	10.20	BRBS	1.83	3.20	N114092	1.37
breccia basalt			3.20	4.57	N114093	1.37
			4.57	6.10	N114094	1.53
			6.10	7.62	N114095	1.52
			7.62	8.90	N114096	1.28
			8.90	10.20	N114097	1.30
10.20	11.20	BRBS	10.20	11.20	N114098	1.00
breccia basalt with malachite						
11.20	16.46	BRBS	11.20	12.80	N114099	1.60
breccia basalt			12.80	14.33	N114100	1.53
			14.33	15.40	N114166	1.07
			15.40	16.46	N114167	1.06
16.46	19.00	BRBS	16.46	17.98	N114168	1.52
breccia basalt with cuprite			17.98	19.00	N114169	1.02
19.00	19.70	GGBS	19.00	19.70	N114170	0.70
gouged breccia basalt						
19.70	23.45	BRBS	19.70	20.88	N114171	1.18
breccia basalt						
23.45	26.30	BRBS				
hematite stained breccia basalt						
26.30	29.11	BRBS				
breccia basalt						
29.11	29.11	EOH				

Project: 1642 **Hole Number: IC97-64**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.85	CSDH				
casing						
2.85	6.55	OBDH				
overburden						
6.55	11.28	XXLI	6.55	8.08	N114151	1.53
boxwork after sulphide			8.08	11.28	N114152	3.20
11.28	21.95	FLMS	11.28	15.85	N114153	4.57
faulted massive sulphides			15.85	17.22	N114154	1.37
			17.22	21.95	N114155	4.73
21.95	24.69	PYMS	21.95	23.47	N114156	1.52
broken and oxidized massive sulphides			23.47	24.69	N114157	1.22
24.69	27.30	HEPY	24.69	26.21	N114158	1.52
hematitic pyrite			26.21	27.30	N114159	1.09
27.30	33.68	FLBS	27.30	28.19	N114160	0.89
faulted breccia basalt			28.19	29.41	N114161	1.22
			29.41	31.09	N114162	1.68
			31.09	32.46	N114163	1.37
			32.46	33.68	N114164	1.22
33.68	36.88	BRBS	33.68	35.36	N114165	1.68
breccia basalt						
36.88	36.88	EOH				

Project: 1642			Hole Number: IC97-65			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	4.27	OBDH				
overburden						
4.27	7.32	XXLI	4.27	7.32	N114172	3.05
limonitic sand						
7.32	10.36	PHBS	7.32	10.36	N114173	3.04
altered porphyritic basalt						
10.36	15.30	PHBS	10.36	12.19	N114174	1.83
porphyritic basalt with ferricrete bands			12.19	13.75	N114175	1.56
			13.75	15.30	N114176	1.55
15.30	21.75	PHBS	15.30	16.80	N114177	1.50
porphyritic basalt			16.80	18.29	N114178	1.49
21.75	33.22	PHBS				
veined porphyritic basalt						
33.22	33.22	EOH				

Project: 1642 **Hole Number: IC97-66**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.90	CSDH				
casing						
1.90	5.68	OBDH	4.30	5.60	N114179	1.30
			5.60	6.86	N114180	0.00
overburden						
5.68	10.97	BRBS	6.86	8.38	N114181	1.52
breccia basalt			8.38	9.75	N114182	1.37
			9.75	10.97	N114183	1.22
10.97	13.00	BRBS	10.97	12.50	N114184	1.53
breccia basalt						
13.00	17.37	MSBS				
massive basalt						
17.37	17.37	EOH				

Project: 1642 **Hole Number: IC97-67**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.44	OBDH				
overburden						
2.44	4.88	MSBS	2.44	3.66	N114237	1.22
oxidized calcareous massive basalt			3.66	4.88	N114238	1.22
4.88	6.30	CAVN	4.88	6.30	N114239	1.42
limonitic calcite vein						
6.30	10.97	MSBS	6.30	7.92	N114240	1.62
massive basalt			7.92	9.45	N114241	1.53
			9.45	10.97	N114242	1.52
10.97	20.22	MSBS	10.97	12.19	N114243	1.22
massive basalt			12.19	13.41	N114244	1.22
			13.41	16.15	N114245	2.74
			16.15	17.68	N114246	1.53
			17.68	19.51	N114247	1.83
			19.51	20.22	N114248	0.71
20.22	22.56	MSBS	20.22	21.34	N114249	1.12
broken massive basalt			21.34	22.56	N114250	1.22
22.56	28.70	PHBS	22.56	24.08	N114251	1.52
porphyritic breccia basalt			24.08	25.60	N114252	1.52
28.70	36.30	BRBS	32.61	34.14	N114253	1.53
breccia basalt						
36.30	44.81	BRBS				
breccia basalt						
44.81	44.81	EOH				

Project: 1642 **Hole Number: IC97-68**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.30	CSDH				
casing						
3.30	4.00	OBDH				
overburden						
4.00	13.11	BRBS	4.00	5.50	N114185	1.50
breccia basalt			5.50	7.01	N114186	1.51
			7.01	8.38	N114187	1.37
			8.38	10.36	N114188	1.98
			10.36	13.11	N114189	2.75
13.11	17.98	MSBS	13.11	14.48	N114190	1.37
massive basalt						
17.98	17.98	EOH				

Project: 1642 **Hole Number: IC97-69**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.00	CSDH				
casing						
3.00	3.66	OBDH				
overburden						
3.66	5.40	MSBS	3.66	5.40	N114191	1.74
gainy basalt						
5.40	12.50	BRBS	5.40	6.40	N114192	1.00
breccia basalt			6.40	7.92	N114193	1.52
			7.92	9.45	N114194	1.53
			9.45	10.97	N114195	1.52
			10.97	12.50	N114196	1.53
12.50	15.60	BRBS	12.50	14.02	N114197	1.52
breccia basalt			14.02	15.60	N114198	1.58
15.60	16.65	SHBS	15.60	16.65	N114199	1.05
sheared breccia basalt						
16.65	20.95	BRBS	16.65	17.50	N114200	0.85
breccia basalt			17.50	18.75	N114301	1.25
			18.75	20.95	N114302	2.20
20.95	23.05	BRBS	20.95	21.95	N114303	1.00
breccia basalt with cuprite			21.95	23.05	N114304	1.10
23.05	24.70	MSBS	23.05	24.70	N114305	1.65
massive basalt						
24.70	25.85	BRBS	24.70	25.85	N114306	1.15
strained breccia basalt						
25.85	31.39	BRCH	25.85	27.43	N114307	1.58
ribbon bedded chert			27.43	28.96	N114308	1.53
31.39	31.39	EOH				

Project: 1642 **Hole Number: IC97-69**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.00	CSDH				
casing						
3.00	3.66	OBDH				
overburden						
3.66	5.40	MSBS	3.66	5.40	N114191	1.74
gainy basalt						
5.40	12.50	BRBS	5.40	6.40	N114192	1.00
breccia basalt			6.40	7.92	N114193	1.52
			7.92	9.45	N114194	1.53
			9.45	10.97	N114195	1.52
			10.97	12.50	N114196	1.53
12.50	15.60	BRBS	12.50	14.02	N114197	1.52
breccia basalt			14.02	15.60	N114198	1.58
15.60	16.65	SHBS	15.60	16.65	N114199	1.05
sheared breccia basalt						
16.65	20.95	BRBS	16.65	17.50	N114200	0.85
breccia basalt			17.50	18.75	N114301	1.25
			18.75	20.95	N114302	2.20
20.95	23.05	BRBS	20.95	21.95	N114303	1.00
breccia basalt with cuprite			21.95	23.05	N114304	1.10
23.05	24.70	MSBS	23.05	24.70	N114305	1.65
massive basalt						
24.70	25.85	BRBS	24.70	25.85	N114306	1.15
strained breccia basalt						
25.85	31.39	BRCH	25.85	27.43	N114307	1.58
ribbon bedded chert			27.43	28.96	N114308	1.53
31.39	31.39	EOH				

Project: 1642 **Hole Number: IC97-70**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	4.42	OBDH				
overburden						
4.42	20.22	MSBS	4.42	5.79	N114254	1.37
massive basalt			5.79	7.01	N114255	1.22
			7.01	8.84	N114256	1.83
			8.84	10.21	N114257	1.37
			10.21	12.50	N114258	2.29
			17.68	20.22	N114259	2.54
20.22	21.34	MSCH	20.22	21.34	N114260	1.12
massive grey chert						
21.34	22.66	MSBS	21.34	22.66	N114261	1.32
massive basalt						
22.66	23.77	MSBS	22.66	23.77	N114262	1.11
broken and veined massive basalt						
23.77	30.97	MSBS	23.77	25.60	N114263	1.83
massive basalt			29.87	30.97	N114264	1.10
30.97	33.14	HECH	30.97	32.71	N114265	1.74
hematitic chert			32.71	33.14	N114266	0.43
33.14	37.08	PYMS	33.14	34.75	N114267	1.61
massive sulphides			34.75	36.42	N114268	1.67
			36.42	37.08	N114269	0.66
37.08	38.40	PHBS	37.08	38.40	N114270	1.32
porphyritic basalt with cuprite						
38.40	49.53	PHBS	38.40	39.32	N114271	0.92
porphyritic basalt			39.32	40.84	N114355	1.52
49.53	49.53	EOH				

Project: 1642 **Hole Number: IC97-70**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH *casing*				
1.22	4.42	OBDH *overburden*				
4.42	20.22	MSBS *massive basalt*	4.42	5.79	N114254	1.37
			5.79	7.01	N114255	1.22
			7.01	8.84	N114256	1.83
			8.84	10.21	N114257	1.37
			10.21	12.50	N114258	2.29
			17.68	20.22	N114259	2.54
20.22	21.34	MSCH *massive grey chert*	20.22	21.34	N114260	1.12
21.34	22.66	MSBS *massive basalt*	21.34	22.66	N114261	1.32
22.66	23.77	MSBS *broken and veined massive basalt*	22.66	23.77	N114262	1.11
23.77	30.97	MSBS *massive basalt*	23.77	25.60	N114263	1.83
			29.87	30.97	N114264	1.10
30.97	33.14	HECH *ematitic chert*	30.97	32.71	N114265	1.74
			32.71	33.14	N114266	0.43
33.14	37.08	PYMS *massive sulphides*	33.14	34.75	N114267	1.61
			34.75	36.42	N114268	1.67
			36.42	37.08	N114269	0.66
37.08	38.40	PHBS *porphyritic basalt with cuprite*	37.08	38.40	N114270	1.32
38.40	49.53	PHBS *porphyritic basalt*	38.40	39.32	N114271	0.92
			39.32	40.84	N114355	1.52
49.53	49.53	EOH				

Project: 1642 **Hole Number: IC97-71**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.05	CSDH				
		casing				
2.05	3.35	OBDH				
		overburden				
3.35	7.35	MSBS	3.35	5.35	N114309	2.00
		massive basalt	5.35	7.35	N114310	2.00
7.35	15.85	RBCH	7.35	10.56	N114311	3.21
		ribbon bedded chert	10.56	13.10	N114312	2.54
			13.10	15.85	N114313	2.75
15.85	21.90	CBMS	15.85	18.44	N114314	2.59
		carbonaceous mudstone				
21.90	26.21	RBCH				
		ribbon bedded chert				
26.21	26.21	EOH				

Project: 1642 **Hole Number: IC97-72**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05 CSDH					
casing						
3.05	4.67 OBDH					
overburden						
4.67	9.75 BRBS		4.67	6.10	N114272	1.43
breccia basalt			6.10	7.62	N114273	1.52
			7.62	9.14	N114274	1.52
			9.14	9.75	N114275	0.61
9.75	14.00 BRBS		9.75	11.28	N114276	1.53
strained breccia basalt			11.28	12.61	N114277	1.33
			12.61	14.00	N114278	1.39
14.00	20.72 RBCH		14.00	14.94	N114279	0.94
ribbon bedded basalt			14.94	16.46	N114280	1.52
			16.46	17.53	N114281	1.07
			17.53	19.35	N114282	1.82
			19.35	20.72	N114283	1.37
20.72	22.84 CBMS					
carbonaceous mudstone						
22.84	27.43 RBCH					
ribbon bedded chert						
27.43	27.43 EOH					

Project: 1642 **Hole Number: IC97-73**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	2.10	OBDH				
		overburden				
2.10	7.10	MSBS	2.10	3.66	N114284	1.56
		massive basalt	3.66	7.10	N114285	3.44
7.10	7.32	XXLI	7.10	7.32	N114286	0.22
		boxwork limonite				
7.32	8.53	PYMS	7.32	8.53	N114287	1.21
		massive sulphides				
8.53	11.73	PHBS	8.53	10.06	N114288	1.53
		weathered porphyritic basalt	10.06	11.73	N114289	1.67
11.73	17.68	PHBS	11.73	13.41	N114290	1.68
		porphyritic basalt	13.41	14.78	N114291	1.37
			14.78	16.31	N114292	1.53
			16.31	17.68	N114293	1.37
17.68	29.15	BRBS	17.68	19.20	N114294	1.52
		breccia basalt	19.20	20.73	N114295	1.53
29.15	32.92	BRBS				
		breccia basalt				
32.92	32.92	EOH				

Project: 1642 **Hole Number: IC97-74**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	12.80	PHBS	1.22	2.74	N114329	1.52
porphyritic breccia basalt with weak stringers			2.74	4.27	N114330	1.53
			4.27	5.80	N114331	1.53
			5.80	7.32	N114332	1.52
			7.32	8.84	N114333	1.52
			8.84	10.80	N114334	1.96
			10.80	12.80	N114335	2.00
12.80	28.50	PHBS	12.80	14.94	N114336	2.14
porphyritic basalt			14.94	16.34	N114337	1.40
			16.34	18.29	N114500	1.95
			18.29	19.51	N114556	1.22
			19.51	21.03	N114557	1.52
			21.03	22.56	N114558	1.53
			22.56	24.08	N114559	1.52
			24.08	25.45	N114560	1.37
			25.45	26.98	N114561	1.53
			26.98	28.50	N114562	1.52
28.50	35.10	PHBS	28.50	29.72	N114563	1.22
porphyritic breccia basalt with weak stringers			29.72	30.95	N114564	1.23
			30.95	32.16	N114565	1.21
			32.16	33.68	N114566	1.52
			33.68	35.10	N114567	1.42
35.10	39.32	PHBS	35.10	36.27	N114568	1.17
weak porphyritic basalt			36.27	37.80	N114569	1.53
			37.80	39.32	N114570	1.52
39.32	49.99	BRBS	39.32	40.84	N114571	1.52
breccia basalt			40.84	42.37	N114572	1.53
49.99	49.99	EOH				

Project: 1642			Hole Number: IC97-75			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.50 CSDH					
casing						
3.50	6.00 OBDH					
overburden						
6.00	7.92 BRBS		6.00	7.92	N114315	1.92
breccia basalt						
7.92	23.93 BRBS		7.92	9.45	N114316	1.53
breccia basalt			9.45	11.35	N114317	1.90
			11.35	13.26	N114318	1.91
			13.26	14.78	N114319	1.52
			14.78	16.31	N114320	1.53
			16.31	18.29	N114321	1.98
			18.29	19.81	N114322	1.52
			19.81	21.34	N114323	1.53
			21.34	22.71	N114324	1.37
			22.71	23.93	N114325	1.22
23.93	28.19 BRBS		23.93	26.67	N114326	2.74
breccia basalt			26.67	28.19	N114327	1.52
28.19	29.65 BRBS		28.19	29.65	N114328	1.46
breccia basalt						
29.65	31.09 RBCH					
ribbon bedded chert						
31.09	31.09 EOH					

Project: 1642 **Hole Number: IC97-76**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	4.42	OBDH				
		overburden				
4.42	6.15	MSBS				
		broken massive basalt				
6.15	18.44	MSBS	6.15	7.62	N114296	1.47
		massive basalt	7.62	9.14	N114297	1.52
			9.14	10.67	N114298	1.53
			10.67	12.19	N114299	1.52
			12.19	13.11	N114300	0.92
			13.11	14.48	N114351	1.37
			14.48	15.85	N114352	1.37
			15.85	17.53	N114353	1.68
			17.53	18.44	N114354	0.91
18.44	25.47	MSBS				
		massive basalt				
25.47	31.09	MSBS				
		massive basalt				
31.09	31.09	EOH				

Project: 1642 **Hole Number: IC97-77**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	7.32	MSBS	1.22	2.74	N114338	1.52
massive basalt			2.74	4.27	N114339	1.53
			4.27	5.79	N114340	1.52
			5.79	7.32	N114341	1.53
7.32	8.84	MSBS	7.32	8.84	N114342	1.52
weathered massive basalt						
8.84	18.00	XXLI	8.84	11.89	N999002	3.05
boxwork after massive sulphides			11.89	13.41	N114343	1.52
			13.41	14.94	N114344	1.53
			14.94	16.46	N999003	1.52
			16.46	18.00	N114345	1.54
18.00	19.51	PHBS	18.00	19.51	N114346	1.51
weathered porphyritic basalt						
19.51	29.87	PHBS	19.51	21.34	N114347	1.83
porphyritic basalt			21.34	23.01	N114348	1.67
			23.01	24.38	N114349	1.37
			24.38	25.91	N114350	1.53
			25.91	27.13	N114401	1.22
			27.13	28.35	N114402	1.22
			28.35	29.87	N114403	1.52
29.87	33.50	PHBS	29.87	31.09	N114404	1.22
porphyritic breccia basalt						
33.50	34.40	PHBS				
porphyritic basalt						
34.40	35.20	CAVN				
calcite vein						
35.20	36.10	PHBS				
porphyritic basalt						
36.10	40.84	PHBS				
porphyritic basalt						
40.84	43.20	PHBS				
porphyritic basalt						
43.20	43.20	EOH				

Project: 1642 **Hole Number: IC97-78**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH *casing*				
2.44	3.66	OBDH *overburden*				
3.66	5.38	XXLI *ferricrete*	3.66	5.38	N114356	1.72
5.38	7.00	BRBS *breccia basalt*	5.38	7.00	N114357	1.62
7.00	14.02	FBBS *faulted breccia basalt*	7.00	7.92	N114358	0.92
			7.92	9.14	N114359	1.22
			9.14	10.67	N114360	1.53
			10.67	12.19	N114361	1.52
			12.19	13.41	N114362	1.22
			13.41	14.02	N114363	0.61
14.02	17.07	BRBS *broken breccia basalt*	14.02	15.54	N114364	1.52
			15.54	17.07	N114365	1.53
17.07	18.61	GGBS *gouged breccia basalt*	17.07	18.61	N114366	1.54
18.61	31.09	MSBS *massive basalt*	18.61	20.42	N114367	1.81
31.09	31.09	EOH				

Project: 1642 **Hole Number: IC97-79**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.14	OBDH				
overburden						
2.14	22.06	PHBS	2.14	3.35	N114368	1.21
porphyritic basalt			3.35	4.72	N114369	1.37
			4.72	6.25	N114370	1.53
			6.25	8.23	N114371	1.98
			8.23	9.75	N114372	1.52
			9.75	11.28	N114373	1.53
			11.28	12.80	N114374	1.52
			12.80	14.78	N114375	1.98
			14.78	16.31	N114376	1.53
			16.31	17.83	N114377	1.52
			17.83	19.51	N114378	1.68
			19.51	21.03	N114379	1.52
			21.03	22.06	N114380	1.03
22.06	30.74	BRBS	22.06	23.62	N114381	1.56
breccia basalt			23.62	25.30	N114382	1.68
			25.30	26.96	N114383	1.66
			26.96	28.32	N114384	1.36
			28.32	29.57	N114385	1.25
			29.57	30.74	N114386	1.17
30.74	35.10	SGBS	30.74	32.61	N114387	1.87
stringer basalt			32.61	34.14	N114388	1.53
			34.14	35.10	N114389	0.96
35.10	38.91	SGBS	35.10	36.06	N114390	0.96
stringer basalt			36.06	37.19	N114391	1.13
			37.19	38.91	N114392	1.72
38.91	47.22	BRBS	38.91	40.23	N114393	1.32
breccia basalt			40.23	41.76	N114394	1.53
			41.76	42.98	N114395	1.22
			42.98	44.50	N114396	1.52
			44.50	45.72	N114397	1.22
			45.72	47.22	N114398	1.50
47.22	48.65	SGBS	47.22	48.65	N114399	1.43
stringer basalt						
48.65	49.99	BRBS	48.65	49.99	N114400	1.34
breccia basalt						
49.99	49.99	EOH				

Project: 1642			Hole Number: IC97-80			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	17.25	FLBS	3.96	9.75	N114405	5.79
faulted breccia basalt			9.75	11.13	N114406	1.38
			11.13	13.11	N114407	1.98
			13.11	14.63	N114408	1.52
			14.63	15.85	N114409	1.22
			15.85	17.25	N114410	1.40
17.25	19.20	CAVN	17.25	19.20	N114411	1.95
carbonate vein with basalt fragments						
19.20	22.86	FLBS	19.20	20.88	N114412	1.68
faulted and gouged basalt			20.88	22.86	N114413	1.98
22.86	25.00	BRBS				
aphanitic breccia basalt						
25.00	26.15	FLBS				
faulted basalt						
26.15	26.82	RBCH				
tectonized ribbon bedded chert						
26.82	26.82	EOH				

Project: 1642 **Hole Number: IC97-81**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	3.20	OBDH				
		overburden				
3.20	10.36	BRBS	3.20	4.57	N114414	1.37
		aphanitic breccia basalt	4.57	6.40	N114415	1.83
			6.40	7.77	N114416	1.37
			7.77	9.14	N114417	1.37
			9.14	10.36	no core	1.22
10.36	16.60	SGBS	10.36	11.89	N114418	1.53
		stringer basalt	11.89	13.41	N114419	1.52
			13.41	14.94	N114420	1.53
			14.94	16.60	N114421	1.66
16.60	19.43	PYSG	16.60	17.98	N114422	1.38
		pyritic stringer sulfides	17.98	19.43	N114423	1.45
19.43	20.75	SGBS	19.43	20.75	N114424	1.32
		stringer basalt				
20.75	23.20	BRBS	20.75	22.00	N114425	1.25
		aphanitic breccia basalt	22.00	23.20	N114426	1.20
23.20	26.80	BRBS	23.20	24.40	N114427	1.20
		breccia basalt with hematitic matrix	24.40	25.60	N114428	1.20
			25.60	26.80	N114429	1.20
26.80	28.85	SGBS	26.80	28.85	N114430	2.05
		very weak stringer basalt				
28.85	30.50	BRBS	28.85	30.50	N114431	1.65
		aphanitic breccia basalt with Ct				
30.50	45.72	BRBS	30.50	32.30	N114432	1.80
		aphanitic breccia basalt	32.30	34.14	N114433	1.84
45.72	45.72	EOH				

Project: 1642 **Hole Number: IC97-82**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.94	XXLI	1.22	2.94	N114451	1.72
boxwork						
2.94	7.91	XXLI	2.94	4.16	N114452	1.22
limonitic soil			4.16	5.64	N114453	1.48
			5.64	6.70	N114454	1.06
			6.70	7.91	N114455	1.21
7.91	17.93	SSSG	7.91	9.75	N114456	1.84
stringer sulphides			9.75	11.28	N114457	1.53
			11.28	12.80	N114458	1.52
			12.80	14.33	N114459	1.53
			14.33	15.85	N114460	1.52
			15.85	17.93	N114461	2.08
17.93	21.03	PHBS	17.93	19.40	N114462	1.47
broken porphyritic basalt			19.40	21.03	N114463	1.63
21.03	25.04	BRBS	21.03	22.56	N114464	1.53
breccia basalt			22.56	24.08	N114465	1.52
			24.08	25.04	N114466	0.96
25.04	29.17	PYSG	25.04	26.30	N114467	1.26
pyrite stringers			26.30	27.70	N114468	1.40
			27.70	29.17	N114469	1.47
29.17	30.37	BRBS	29.17	30.37	N114470	1.20
highly oxidized breccia basalt						
30.37	33.10	BRBS	30.37	31.85	N114471	1.48
breccia basalt			31.85	33.10	N114472	1.25
33.10	46.33	BRBS	33.10	34.75	N114473	1.65
breccia basalt						
46.33	46.33	EOH				

Project: 1642			Hole Number: IC97-83			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	3.04	OBDH				
overburden						
3.04	11.67	PHBS	3.04	4.27	N114474	1.23
broken porphyritic basalt			4.27	5.79	N114475	1.52
			5.79	7.32	N114476	1.53
			7.32	8.69	N114477	1.37
			8.69	10.36	N114478	1.67
			10.36	11.67	N114479	1.31
11.67	23.62	PHBS	11.67	13.41	N114480	1.74
porphyritic breccia basalt			13.41	14.94	N114481	1.53
			14.94	16.46	N114482	1.52
			16.46	17.98	N114483	1.52
			17.98	19.35	N114484	1.37
			19.35	21.18	N114485	1.83
			21.18	23.62	N114486	2.44
23.62	33.02	BRBS	23.62	25.15	N114487	1.53
breccia basalt			25.15	26.67	N114488	1.52
			26.67	28.19	N114489	1.52
			28.19	29.71	N114490	1.52
			29.71	31.39	N114491	1.68
			31.39	33.02	N114492	1.63
33.02	34.05	SGBS	33.02	34.05	N114493	1.03
stringer basalt						
34.05	36.10	BRBS	34.05	36.10	N114494	2.05
breccia basalt						
36.10	40.57	SGBS	36.10	37.80	N114495	1.70
very weak stringer basalt			37.80	39.32	N114496	1.52
			39.32	40.57	N114497	1.25
40.57	41.44	CRVN	40.57	41.44	N114498	0.87
carbonate vein						
41.44	46.63	BRBS	41.44	43.59	N114499	2.15
breccia basalt						
46.63	46.63	EOH				

Project: 1642 **Hole Number: IC97-84**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing				
1.22	5.79	MSBS	1.22	2.74	N114434	1.52
		broken massive basalt	2.74	4.57	N114435	1.83
			4.57	5.79	N114436	1.22
5.79	10.28	MSBS	5.79	7.30	N114437	1.51
		intensively weathered massive basalt	7.30	8.80	N114438	1.50
			8.80	10.28	N114439	1.48
10.28	14.17	MSBS	10.28	11.89	N114440	1.61
		massive basalt	11.89	14.17	N114441	2.28
14.17	15.65	MSBS	14.17	15.65	N114442	1.48
		strongly weathered massive basalt				
15.65	15.85	HECH	15.65	15.85	N114443	0.20
		hematitic chert				
15.85	21.95	PYMS	15.85	17.68	N114444	1.83
		shattered / broken massive sulfides	17.68	18.90	N114445	1.22
			18.90	20.12	N114446	1.22
			20.12	21.95	N114447	1.83
21.95	26.65	PYMS	21.95	23.48	N114448	1.53
		massive sulfides	23.48	24.99	N114449	1.51
			24.99	26.65	N114450	1.66
26.65	28.25	PHBS	26.65	28.25	N114551	1.60
		altered porphyritic basalt				
28.25	30.18	PHBS	28.25	30.18	N114552	1.93
		broken porphyritic basalt with Ct				
30.18	40.23	PHBS	30.18	31.70	N114553	1.52
		porphyritic basalt	31.70	33.60	N114554	1.90
			33.60	35.36	N114555	1.76
40.23	40.23	EOH				

Project: 1642 **Hole Number: IC97-85**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
casing						
1.83	4.00	OBDH				
overburden						
4.00	17.05	PHBS	4.00	6.10	N114573	2.10
porphyritic basalt			6.10	7.77	N114574	1.67
			7.77	9.45	N114575	1.68
			9.45	10.97	N114576	1.52
			10.97	12.95	N114577	1.98
			12.95	14.48	N114578	1.53
			14.48	15.70	N114579	1.22
			15.70	17.05	N114580	1.35
17.05	20.42	PHBS	17.05	18.90	N114581	1.85
porphyritic breccia basalt			18.90	20.42	N114582	1.52
20.42	25.40	PHBS	20.42	21.95	N114583	1.53
porphyritic breccia basalt			21.95	23.47	N114584	1.52
			23.47	25.40	N114585	1.93
25.40	29.75	PHBS	25.40	26.52	N114586	1.12
hematitic porphyritic basalt with stringers			26.52	28.04	N114587	1.52
			28.04	29.75	N114588	1.71
29.75	33.95	PHBS	29.75	31.09	N114589	1.34
porphyritic basalt			31.09	32.61	N114590	1.52
			32.61	33.95	N114591	1.34
33.95	43.28	BRBS	33.95	35.66	N114592	1.71
aphanitic breccia basalt			35.66	37.19	N114593	1.53
43.28	43.28	EOH				

EXPATRIATE RESOURCES LTD.

ICE Property

1997 Drill Logs

Reprinted: Spring 2004

hole_id	north	east	elev	length	st_dip	st_az	logby	project	property	mapref	claim	region	datestrt	datefin	assayer
ID97-01	6862714	376870	1288	173.13	-75	312	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	14/05/1996	17/05/1996	39
ID97-02	6862676	376930	1267	210.01	-50	310	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	17/05/1996	21/05/1996	32
ID97-03	6862676	376930	1267	178	-70	310	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	22/05/1996	25/05/1996	2
ID97-04	6862731	376851	1295	98.45	-50	303	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	26/05/1996	29/05/1996	3
ID97-05	6862666	376850	1278	264	-50	318	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	29/05/1996	05/06/1996	0
ID97-06	6862621	377008	1255	189	-50	314	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	04/06/1996	10/06/1996	0
ID97-07	6862666	376850	1278	175	-80	318	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	06/06/1996	10/06/1996	0
ID97-08	6862615	376912	1257	132.28	-50	307	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	10/06/1996	14/06/1996	1
ID97-09	6862621	377008	1255	187	-72	305	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	10/06/1996	15/06/1996	0
ID97-10	6862615	376912	1258	150	-80	300	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	14/06/1996	16/06/1996	0
ID97-11	6862724	376944	1273	190.2	-51	309	Bryan	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	16/06/1996	21/06/1996	4
ID97-12	6862752	376907	1286	168	-49	303	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	17/06/1996	21/06/1996	4
ID97-13	6862787	376943	1283	149.05	-50	305	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	21/06/1996	24/06/1996	13
ID97-14	6862691	376988	1264	192.02	-51	309	Bryan	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	21/06/1996	27/06/1996	6
ID97-15	6862828	376975	1284	128	-49	305	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	25/06/1996	28/06/1996	0
ID97-16	6862691	376988	1264	194	-75	310	Bryan	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	27/06/1996	02/07/1996	3
ID97-17	6862801	377009	1275	132.28	-50	307	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	28/06/1996	03/07/1996	0
ID97-18	6862749	376995	1267	178.31	-44	307	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	03/07/1996	07/07/1996	0
ID97-19	6862802	377012	1274	178	-69	304	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	03/07/1996	07/07/1996	13
ID97-20	6862749	376995	1267	157	-66	308	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	07/07/1996	11/07/1996	6
ID97-21	6862752	377089	1263	155.45	-52	309	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	08/07/1996	13/07/1996	0
ID97-22	6862704	377057	1260	146.3	-50	307	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	11/07/1996	15/07/1996	3
ID97-23	6862752	377089	1263	272	-70	311	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	13/07/1996	19/07/1996	0
ID97-24	6862704	377057	1260	159.41	-70	306	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	15/07/1996	20/07/1996	0
ID97-25	6862649	377062	1254	186	-58	309	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	20/07/1996	25/07/1996	0
ID97-26	6862843	377047	1271	165	-70	301	Bryan	1642	ICE	NTS 105G/13,14	Ice 14	Watson Lake Mining District	26/07/1996	30/07/1996	3
ID97-27	6862859	376927	1302	110.03	-51	308	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	30/07/1996	04/08/1996	0
ID97-28	6862609	376846	1267	146	-50	306	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	01/08/1996	05/08/1996	3
ID97-29	6862832	376884	1303	63.09	-48	306	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	04/08/1996	06/08/1996	0
ID97-30	6862707	376797	1295	103.02	-47	305	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	05/08/1996	08/08/1996	8
ID97-31	6862789	376856	1301	101	-50	309	Tanja	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	06/08/1996	09/08/1996	1
ID97-32	6862881	377086	1274	111.25	-72	306	Sefika	1642	ICE	NTS 105G/13,14	Ice 14	Watson Lake Mining District	10/08/1996	13/08/1996	0
ID97-33	6862781	377118	1264	159	-49	305	Sefika	1642	ICE	NTS 105G/13,14	Ice 14	Watson Lake Mining District	13/08/1996	16/08/1996	0
ID97-34	6862577	376887	1254	169	-50	310	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	17/08/1996	20/08/1996	0
ID97-35	6862492	376839	1244	89	-50	306	Sefika	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	20/08/1996	22/08/1996	0
ID97-36	6862709	376883	1284	175.41	-54	306	Kosta	1642	ICE	NTS 105G/13,14	Ice 12	Watson Lake Mining District	05/09/1996	09/09/1996	14

Project: 1642 **Hole Number: ID97-01**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH *casing*				
3.05	8.40	MSBS *massive basalt*				
8.40	13.25	MSBS *veined massive basalt*				
13.25	38.00	MSBS *massive basalt*				
38.00	83.12	MSBS *massive basalt*	78.64	80.16	N112551	*1.52
			80.16	81.69	N112552	1.53
			81.69	83.12	N112553	1.43
83.12	91.09	PYMS *massive sulphides*	83.12	84.28	N112554	1.16
			84.28	85.80	N112555	1.52
			85.80	86.56	N112556	0.76
			86.56	88.09	N112557	1.53
			88.09	89.61	N112558	1.52
			89.61	91.09	N112559	1.48
91.09	96.77	BRBS *breccia basalt*	91.09	92.66	N112560	1.57
			92.66	93.88	N112561	1.22
			93.88	95.40	N112562	1.52
			95.40	96.77	N112563	1.37
96.77	122.83	PYSM *semi-massive sulphides*	96.77	98.15	N112564	1.38
			98.15	98.76	N112565	0.61
			98.76	100.28	N112566	1.52
			100.28	101.80	N112567	1.52
			101.80	103.33	N112568	1.53
			103.33	104.85	N112569	1.52
			104.85	105.77	N112570	0.92
			105.77	107.14	N112571	1.37
			107.14	107.90	N112572	0.76
			107.90	109.42	N112573	1.52
			109.42	110.95	N112574	1.53
			110.95	112.47	N112575	1.52
			112.47	114.00	N112576	1.53
			114.00	115.52	N112577	1.52
			115.52	117.04	N112578	1.52
			117.04	118.56	N112579	1.52
			118.56	120.09	N112580	1.53
			120.09	121.62	N112581	1.53
			121.62	122.83	N112582	1.21

Project: 1642 **Hole Number: ID97-01**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
122.83	130.00	HESG	122.83	124.36	N112583	1.53
		hematitic stringers in breccia basalt	124.36	125.88	N112584	1.52
			125.88	127.41	N112585	1.53
			127.41	128.93	N112586	1.52
			128.93	130.00	N112587	1.07
130.00	143.02	SSSG	130.00	130.91	N112588	0.91
		stringer sulphides	130.91	132.28	N112589	1.37
			132.28	133.81	N112590	1.53
			133.81	135.33	N112591	1.52
			135.33	136.86	N112592	1.53
			136.86	138.38	N112593	1.52
			138.38	139.90	N112594	1.52
			139.90	141.43	N112595	1.53
			141.43	143.02	N112596	1.59
143.02	150.20	BRBS	143.02	144.17	N112597	1.15
		breccia basalt	144.17	145.69	N112598	1.52
			145.69	147.07	N112599	1.38
150.20	171.15	BRBS				
		breccia basalt				
171.15	173.13	MSBS				
		massive basalt				
173.13	173.13	EOH				

Project: 1642 **Hole Number: ID97-02**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CASN				
3.05	11.58	MSBS				
		fine grained massive basalt				
11.58	12.56	HEMS				
		red-brown siliceous mudstone				
12.56	28.70	MSBS				
		fine grained massive basalt				
28.70	29.50	MSCH				
		red and green massive chert				
29.50	42.02	MSBS				
		massive basalt				
42.02	44.44	QZVN				
		Qz-calcite-chlorite vein				
44.44	62.16	MSBS				
		fine grained massive basalt				
62.16	69.80	MSBS				
		veined massive basalt				
69.80	75.44	MSBS				
		massive basalt				
75.44	82.50	BRBS	81.05	82.50	N112600	1.45
		breccia basalt				
82.50	83.80	HEMS	82.50	83.14	N111880	0.64
		red-brown hematitic mudstone	83.14	83.80	N111881	0.66
83.80	88.41	PYMS	83.80	84.73	N111882	0.93
		pyritic massive sulphides with CPY	84.73	85.95	N111883	1.22
			85.95	87.15	N111884	1.20
			87.15	88.41	N111885	1.26
88.41	106.75	PHBS	88.41	89.74	N111886	1.33
		porphyritic breccia basalt	89.74	91.14	N111887	1.40
			91.14	92.66	N111888	1.52
106.75	109.40	BRBS				
		epidote rich breccia basalt				
109.40	115.15	MSBS				
		massive basalt				
115.15	121.34	BRBS	117.00	118.41	N111889	1.41
		with earthy hematite	118.41	119.89	N111890	1.48
			119.89	121.34	N111891	1.45
121.34	128.70	SSSG	121.34	122.83	N111892	1.49
		sulphide stringers with hematite	122.83	124.36	N111893	1.53

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			124.36	125.37	N111894	1.01
			125.37	126.19	N111895	0.82
			126.19	127.71	N111896	1.52
			127.71	128.70	N111897	0.99
128.70	133.81	SSSG	128.70	129.67	N111898	0.97
		sulphide stringers	129.67	130.75	N111899	1.08
			130.75	132.28	N111900	1.53
			132.28	133.81	N112601	1.53
133.81	135.33	SSSG	133.81	135.33	N112602	1.52
		sulphide stringers with hematite				
135.33	143.95	PYSG	135.33	136.86	N112603	1.53
		pyritic sulphide stringers	136.86	138.38	N112604	1.52
			138.38	139.90	N112605	1.52
			139.90	141.43	N112606	1.53
			141.43	142.95	N112607	1.52
			142.95	143.95	N112608	1.00
143.95	145.02	SSSG	143.95	145.02	N112609	1.07
		sulphide stringers with hematitie				
145.02	158.52	SSSG	145.02	146.00	N112610	0.98
		sulphide stringers with native CU	146.00	147.52	N112611	1.52
			147.52	149.05	N112612	1.53
			149.05	150.57	N112613	1.52
			150.57	152.10	N112614	1.53
			152.10	153.62	N112615	1.52
			153.62	155.14	N112616	1.52
			155.14	156.51	N112617	1.37
			156.51	158.04	N112618	1.53
			158.04	158.52	N112619	0.48
158.52	185.31	BRBS	158.52	159.56	N112620	1.04
		breccia basalt	159.56	160.93	N112621	1.37
			160.93	162.46	N112622	1.53
185.31	210.01	MSBS				
		massive basalt				
210.01	210.01	EOH				

Project: 1642 **Hole Number: ID97-03**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.35	CSDH				
casing						
3.35	6.32	MSBS				
massive basalt						
6.32	8.45	MSCH				
massive chert						
8.45	16.12	MSBS				
massive basalt						
16.12	17.30	MSCH				
massive chert						
17.30	40.33	MSBS	22.27	23.42	N114102	1.15
massive basalt						
40.33	41.00	HEMS				
hematitic mudstone						
41.00	50.60	MSBS				
broken massive basalt						
50.60	71.17	MSBS				
massive basalt						
71.17	77.00	MSBS				
very fine grained massive basalt						
77.00	94.06	MSBS	89.61	91.14	N112623	1.53
massive basalt			91.14	92.66	N112624	1.52
			92.66	94.06	N112625	1.40
94.06	97.14	PYMS	94.06	95.70	N112626	1.64
massive pyrite with chalcopyrite			95.70	97.14	N112627	1.44
97.14	97.49	HECH	97.14	97.49	N112628	0.35
hematitic chert						
97.49	107.29	PHBSm	97.49	98.76	N112629	1.27
porphyritic breccia basalt			98.76	100.28	N112630	1.52
			100.28	101.80	N112631	1.52
107.29	113.88	PHBSm				
porphyritic basalt						
113.88	117.40	MSBS				
massive basalt						
117.40	120.30	BRBS				
epidote veined breccia basalt						
120.30	124.35	BRBS				
breccia basalt						
124.35	138.25	BRBS	135.33	136.86	N112632	1.53
breccia basalt			136.86	138.25	N112633	1.39

Project: 1642			Hole Number: ID97-03			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
138.25	**140.03**	**SGBS**	138.25	139.32	N112634	1.07
weak stringers in breccia basalt			139.32	140.03	N112635	0.71
140.03	**147.90**	**MSBS**	140.03	141.43	N112636	1.40
massive basalt			141.43	142.95	N112637	1.52
147.90	**151.32**	**MSBS**				
broken massive basalt						
151.32	**178.00**	**MSBS**	163.46	164.67	N114103	1.21
massive basalt						
178.00	**178.00**	**EOH**				

Project: 1642 **Hole Number: ID97-04**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	4.27	RBCH				
ribbon bedded chert						
4.27	14.48	MSBS				
broken massive basalt						
14.48	28.41	MSBS				
massive basalt						
28.41	28.85	MSCH				
massive chert						
28.85	50.80	MSBS	46.94	48.46	N112638	1.52
massive basalt			48.46	49.99	N112639	1.53
			49.99	50.80	N112640	0.81
50.80	51.21	MSCH	50.80	51.21	N112641	0.41
massive chert						
51.21	55.71	PYMS	51.21	52.73	N112642	1.52
brecciated sulphides			52.73	54.25	N112643	1.52
			54.25	55.61	N112644	1.36
55.71	58.85	FBBS	55.71	57.00	N112645	1.29
faulted basalt			57.00	57.90	N112646	0.90
			57.90	58.85	N112647	0.95
58.85	68.58	PHBS				
epidote veined porphyritic basalt						
68.58	72.84	PHBS				
porphyritic basalt						
72.84	80.47	BRBS	74.68	76.18	N112648	1.50
breccia basalt			76.18	77.42	N112649	1.24
			77.42	78.94	N112650	1.52
			78.94	80.47	N112651	1.53
80.47	82.33	FBBS	80.47	81.53	N112652	1.06
fault breccia			81.53	82.33	N112653	0.80
82.33	86.76	FBPY	82.33	83.51	N112654	1.18
fault breccia with pyrite clasts			83.51	85.04	N112655	1.53
			85.04	86.76	N112656	1.72
86.76	98.45	FBBS	86.76	87.63	N112657	0.87
fault basalt			87.63	89.15	N112658	1.52
98.45	98.45	EOH				

Project: 1642 **Hole Number: ID97-05**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	1.68	OBDH				
overburden						
1.68	2.64	MSCH				
red massive chert						
2.64	7.08	MSBS				
massive basalt						
7.08	15.85	MSBS				
broken massive basalt						
15.85	27.26	MSBS				
massive basalt						
27.26	28.52	HECH				
hematitic chert						
28.52	34.55	MSBS				
massive basalt						
34.55	72.26	MSBS				
epidote-chlorite altered massive basalt						
72.26	73.67	MSBS				
fine grained massive basalt						
73.67	74.80	MSBS				
broken massive basalt						
74.80	85.90	MSBS				
epidote altered massive basalt						
85.90	86.26	HECH				
hematitic chert						
86.26	95.40	PHBS	91.51	92.89	N112659	1.38
porphyritic breccia basalt			92.89	94.18	N112660	1.29
			94.18	95.40	N112661	1.22
95.40	102.07	SSSG	95.40	96.62	N112662	1.22
stringer sulphides			96.62	98.15	N112663	1.53
			98.15	99.24	N112664	1.09
			99.24	100.28	N112665	1.04
			100.28	101.19	N112666	0.91
			101.19	102.07	N112667	0.88
102.07	104.91	BRBS	102.07	103.33	N112668	1.26
breccia basalt			103.33	104.91	N112669	1.58
104.91	117.60	HESG	104.91	105.77	N112670	0.86
hematitic stringers in breccia basalt with 10% PY			105.77	106.98	N112671	1.21
			106.98	107.90	N112672	0.92

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			107.90	109.42	N112673	1.52
			109.42	110.95	N112674	1.53
			110.95	112.47	N112675	1.52
			112.47	114.00	N112676	1.53
			114.00	115.52	N112677	1.52
			115.52	116.43	N112678	0.91
			116.43	117.60	N112679	1.17
117.60	**121.17**	**HESG**	117.60	118.57	N112680	0.97
hematitic stringers in BRBS with 15-20% PY			118.57	120.09	N112681	1.52
			120.09	121.17	N112682	1.08
121.17	**124.00**	**PYSG**	121.17	122.53	N112683	1.36
very pyritic stringers			122.53	124.00	N112684	1.47
124.00	**127.42**	**SSSG**	124.00	125.30	N112685	1.30
stringer sulphides			125.30	126.19	N112686	0.89
			126.19	127.42	N112687	1.23
127.42	**127.97**	**HECH**	127.42	127.95	N112688	0.53
			127.95	129.24	N112689	0.00
hematitic chert						
127.97	**137.60**	**BRBS**	129.24	130.45	N112690	1.21
chlorite altered			130.45	131.98	N112691	1.53
137.60	**140.38**	**GGBS**				
basalt gouge						
140.38	**145.59**	**BRBS**				
breccia basalt						
145.59	**149.20**	**MSBS**				
massive basalt						
149.20	**156.97**	**FBBS**				
faulted basalt						
156.97	**166.70**	**MSBS**				
broken massive basalt						
166.70	**170.38**	**FBBS**				
faulted basalt						
170.38	**182.73**	**MSBS**				
massive basalt						
182.73	**189.80**	**MSBS**				
broken massive basalt						
189.80	**192.94**	**BRBS**	189.80	191.41	N112692	1.61
altered breccai basalt			191.41	192.94	N112693	1.53
192.94	**198.73**	**CBMS**	192.94	194.46	N112694	1.52
carbonaceous mudstone			194.46	195.99	N112695	1.53

Project: 1642			Hole Number: ID97-05			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			195.99	197.51	N112696	1.52
			197.51	198.73	N112697	1.22
198.73	**213.06**	**RBCH**	198.73	199.95	N112698	1.22
chert interbedded with mudstone			199.95	200.86	N112699	0.91
			200.86	202.08	N112700	1.22
			202.08	203.30	N112751	1.22
			203.30	204.98	N112752	1.68
			204.98	205.74	N112753	0.76
			205.74	207.11	N112754	1.37
			207.11	208.03	N112755	0.92
			208.03	209.25	N112756	1.22
			209.25	210.31	N112757	1.06
			210.31	211.53	N112758	1.22
			211.53	213.06	N112759	1.53
213.06	**226.31**	**RBCH**	213.06	214.58	N112760	1.52
green chert with chlorite-muscovite phyllite			214.58	216.10	N112761	1.52
			216.10	216.87	N112762	0.77
			216.87	218.39	N112763	1.52
			218.39	219.76	N112764	1.37
			219.76	220.68	N112765	0.92
			220.68	221.59	N112766	0.91
			221.59	222.96	N112767	1.37
			222.96	223.72	N112768	0.76
			223.72	224.94	N112769	1.22
			224.94	226.31	N112770	1.37
226.31	**233.78**	**RBCH**	226.31	227.38	N112771	1.07
chert interbedded with carbonaceous mudstone			227.38	228.30	N112772	0.92
			228.30	229.21	N112773	0.91
			229.21	230.73	N112774	1.52
			230.73	232.26	N112775	1.53
			232.26	233.78	N112776	1.52
233.78	**245.97**	**FLMS**	233.78	235.31	N112777	1.53
faulted mudstone			235.31	236.52	N112778	1.21
			236.52	237.74	N112779	1.22
			237.74	238.68	N112780	0.94
			238.68	239.88	N112781	1.20
			239.88	241.25	N112782	1.37
			241.25	242.77	N112783	1.52
			242.77	243.84	N112784	1.07
			243.84	245.06	N112785	1.22

Project: 1642			Hole Number: ID97-05			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			245.06	245.97	N112786	0.91
245.97	**250.70**	**RBCH**	245.97	247.50	N112787	1.53
ribbon chert with carbonaceous mudstone			247.50	248.72	N112788	1.22
			248.72	249.63	N112789	0.91
			249.63	250.70	N112790	1.07
250.70	**254.81**	**FLMS**	250.70	252.22	N112791	1.52
faulted mudstone			252.22	253.90	N112792	1.68
			253.90	254.81	N112793	0.91
254.81	**263.96**	**RBCH**	254.81	256.03	N112794	1.22
ribbon chert with carbonaceous mudstone			256.03	256.95	N112795	0.92
			256.95	258.17	N112796	1.22
			258.17	259.23	N112797	1.06
			259.23	260.30	N112798	1.07
			260.30	261.80	N112799	1.50
			261.80	263.04	N112800	1.24
			263.04	263.96	N112801	0.92
263.96	**263.96**	**EOH**				

Project: 1642 **Hole Number: ID97-06**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	6.10	CSDH				
		casing				
6.10	13.32	OBDH				
		overburden				
13.32	13.72	RBCH				
		grey chert				
13.72	20.48	SDST				
		sandstone				
20.48	23.29	RBCH				
		grey chert				
23.29	27.40	FBSD				
		fault gouge and brecciated sandstone				
27.40	29.48	RBCH				
		grey chert				
29.48	30.58	RBCH				
		grey chert with sandstone				
30.58	32.00	RBCH				
		grey chert with mudstone				
32.00	32.60	RBCH				
		grey chert and sandstone				
32.60	33.52	RBCH				
		grey chert with gouge				
33.52	35.05	SDST				
		sandstone with chert				
35.05	37.36	RBCH				
		ribbon chert				
37.36	43.36	RBCH				
		ribbon chert				
43.36	44.88	MSCH				
		massive chert				
44.88	62.45	RBCH				
		black ribbon chert				
62.45	69.27	FLCH				
		faulted chert with basalt				
69.27	70.69	PHBS				
		porphyritic massive basalt				
70.69	78.64	MSBS				
		massive basalt				
78.64	88.14	MSBS				
		massive basalt				

Project: 1642			Hole Number: ID97-06			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
88.14	88.33	HECH	88.14	88.33	N112802	0.19
hematitic chert with pyrite						
88.33	109.85	MSBS				
massive basalt						
109.85	113.91	MSBS				
massive basalt						
113.91	120.60	MSBS				
massive basalt						
120.60	120.90	MSCH				
pinkish green massive chert						
120.90	125.59	MSBS				
massive basalt						
125.59	138.62	MSBS				
massive basalt						
138.62	142.97	BRBS				
breccia basalt						
142.97	143.58	HECH	142.97	143.58	N112803	0.61
hematitic chert with pyrite stringers						
143.58	151.69	MSBS	148.69	150.19	N112804	1.50
massive basalt			150.19	151.69	N112805	1.50
151.69	153.70	HECH	151.69	152.75	N112806	1.06
hematitic chert with massive pyrite			152.75	153.70	N112807	0.95
153.70	154.53	BRBS	153.70	154.53	N112808	0.83
breccia basalt						
154.53	171.34	BRBS	154.53	156.03	N112809	1.50
breccia basalt			156.03	157.53	N112810	1.50
171.34	178.00	BRBS				
breccia basalt						
178.00	188.67	BRBS				
breccia basalt						
188.67	188.67	EOH				

Project: 1642 **Hole Number: ID97-07**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		Casing				
1.22	2.13	MSCH				
		Massive Chert				
2.13	3.60	MSCH				
		Massive Chert				
3.60	11.28	MSBS				
		Broken Massive Basalt				
11.28	20.88	MSBS				
		Massive Basalt				
20.88	22.15	MSCH				
		Broken Massive Chert				
22.15	25.17	MSBS				
		Broken Massive Basalt				
25.17	26.00	MSCH				
		Massive Chert				
26.00	27.89	FLBS	26.00	26.97	N112811	0.97
		Faulted Basalt	26.97	27.89	N112812	0.92
27.89	28.80	MSBS	27.89	28.80	N112813	0.91
		Massive Basalt				
28.80	29.80	CAVN	28.80	29.80	N112814	1.00
		Calcite Veined Basalt				
29.80	31.55	FLBS	29.80	31.55	N112815	1.75
		Faulted Basalt				
31.55	38.71	MSBS	31.55	32.16	N112816	0.61
		Broken Massive Basalt				
38.71	41.84	MSBS				
		Massive Basalt				
41.84	42.98	MSBS				
		Broken Massive Basalt				
42.98	47.20	MSBS				
		Massive Basalt				
47.20	48.90	MSCH				
		Massive Chert				
48.90	58.20	MSBS				
		Massive Basalt				
58.20	59.00	MSBS				
		Massive Basalt				
59.00	69.30	MSBS				
		Massive Basalt				

Project: 1642			Hole Number: ID97-07			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
69.30	**70.25**	**MSBS**				
Epidote Altered and Veined Massive Basalt						
70.25	**73.67**	**MSBS**				
Massive Basalt						
73.67	**74.26**	**HECH**	73.67	74.26	N112817	0.59
Hematitic Chert						
74.26	**77.20**	**MSBS**	74.26	75.59	N112818	1.33
Massive Basalt			75.59	77.20	N112847	1.61
77.20	**78.18**	**PYMS**	77.20	78.18	N112819	0.98
Massive Pyrite						
78.18	**83.20**	**PHBS**	78.18	79.55	N112820	1.37
Porphyritic Breccia Basalt			79.55	81.08	N112821	1.53
			81.08	82.45	N112822	1.37
83.20	**84.80**	**PHBS**				
Calcite-Epidote veined Porporitic Breccia Basalt						
84.80	**95.20**	**BRBS**				
Aphanitic Breccia Basalt						
95.20	**100.30**	**BRBS**				
Hematitic Aphanitic Breccia Basalt						
100.30	**101.80**	**BRBS**				
Broken Aphanatic Breccia Basalt						
101.80	**108.51**	**BRBS**	104.59	105.46	N112823	0.87
Breccia Basalt			105.46	106.98	N112824	1.52
			106.98	108.51	N112825	1.53
108.51	**120.09**	**SSSG**	108.51	109.88	N112826	1.37
Stringer Sulphides			109.88	110.95	N112827	1.07
			110.95	112.47	N112828	1.52
			112.47	114.00	N112829	1.53
			114.00	115.52	N112830	1.52
			115.52	117.04	N112831	1.52
			117.04	118.57	N112832	1.53
			118.57	120.09	N112833	1.52
120.09	**138.75**	**SSSG**	120.09	121.62	N112834	1.53
Stringer Sulphides			121.62	123.14	N112835	1.52
			123.14	124.66	N112836	1.52
			124.66	126.03	N112837	1.37
			126.03	127.56	N112838	1.53
			127.56	129.08	N112839	1.52
			129.08	130.61	N112840	1.53
			130.61	132.21	N112841	1.60

From	To	Rocktype & Description
138.75	**146.00**	**BRBS**
		Breccia Basalt
146.00	**156.97**	**MSBS**
		Broken Massive Basalt
156.97	**174.96**	**MSBS**
		Massive Basalt
174.96	**174.96**	**EOH**

S_from	S_to	Sample	Width
132.21	133.73	N112842	1.52
133.73	135.26	N112843	1.53
135.26	136.78	N112844	1.52
136.78	137.83	N112845	1.05
137.83	138.75	N112846	0.92
138.75	139.90	N112848	1.15
139.90	141.43	N112849	1.53
141.43	142.95	N112850	1.52

Project: 1642 **Hole Number: ID97-08**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
1.83	2.50	OBDH				
2.50	6.40	MSBS *broken*				
6.40	9.85	MSBS				
9.85	11.94	MSBS *broken*				
11.94	14.60	MSBS				
14.60	16.00	MSBS *broken*				
16.00	17.53	MSBS *calcite veined massive basalt*				
17.53	19.15	MSBS *broken*				
19.15	20.12	RBCH *ribbon bedded chert*				
20.12	21.44	MSBS *broken*				
21.44	23.10	RDCH *red chert*				
23.10	25.00	MSBS *broken*				
25.00	27.23	RBCH *ribbon chert*				
27.23	30.74	MSBS				
30.74	34.15	FLBS *faulted basalt*				
34.15	36.27	MSBS *veined massive basalt*				
36.27	54.60	MSBS				
54.60	62.80	MSBS *fine grained massive basalt*				
62.80	65.00	MSBS *broken*				

Project: 1642 **Hole Number: ID97-08**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
65.00	73.95	MSBS	70.06	71.32	N112885	1.26
			71.32	72.85	N112886	1.53
			72.85	73.95	N112887	1.10
73.95	75.12	PYMS	73.95	75.12	N112888	1.17
		massive sulphide				
75.12	82.80	BRBS	75.12	76.40	N112889	1.28
		porphyritic breccia basalt	76.40	77.42	N112890	1.02
			77.42	78.94	N112891	1.52
82.80	94.78	MSBS				
94.78	99.23	MSBS				
		fine grained massive basalt				
99.23	99.43	PYMS	99.23	99.43	N112892	0.20
		broken massive sulphide				
99.43	101.00	BRBS				
		porphyritic breccia basalt				
101.00	113.35	BRBS				
		aphanitic breccia basalt				
113.35	119.00	BRBSh				
		hematititc breccia basalt				
119.00	131.20	BRBS				
131.20	132.28	BRBSh				
		hematitic breccia basalt				
132.28	132.28	EOH				

Project: 1642 **Hole Number: ID97-09**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	6.71	OBDH				
overburden						
6.71	9.45	SDST				
sandstone						
9.45	14.43	FLCH	9.45	11.94	N112851	2.49
faulted ribbon chert			11.94	14.43	N112852	2.49
14.43	30.08	FLSD	14.43	17.07	N112853	2.64
faulted and gouged sandstone			17.07	19.51	N112854	2.44
			19.51	22.86	N112855	3.35
			22.86	25.91	N112856	3.05
			25.91	27.74	N112857	1.83
			27.74	30.08	N112858	2.34
30.08	30.48	MSBS	30.08	30.48	N112859	0.40
massive basalt						
30.48	35.06	GGCH	30.48	32.46	N112860	1.98
faulted and gouged chert			32.46	35.06	N112861	2.60
35.06	46.54	RBCH	35.06	38.10	N112862	3.04
grey chert			38.10	41.15	N112863	3.05
			41.15	43.58	N112864	2.43
			43.58	46.54	N112865	2.96
46.54	47.91	MSBS	46.54	47.91	N112866	1.37
massive basalt						
47.91	51.67	RBCH	47.91	51.67	N112867	3.76
ribbon chert						
51.67	54.52	RBCH	51.67	54.52	N112868	2.85
grey chert						
54.52	57.00	RBCH	54.52	57.00	N112869	2.48
black ribbon chert						
57.00	58.22	LCDH				
no core						
58.22	63.71	RBCH	58.22	60.96	N112870	2.74
grey and black chert			60.96	63.71	N112871	2.75
63.71	65.58	MSBS				
massive altered basalt						
65.58	71.76	MSBS				
massive basalt						
71.76	75.76	MSBS				
massive basalt, epidote altered						

From	To	Rocktype & Description	S_from	S_to	Sample	Width
75.76	76.55	MSCH				
		massive chert				
76.55	79.06	MSBS				
		veined massive basalt				
79.06	85.65	MSCH				
		massive chert				
85.65	100.47	MSBS				
		massive basalt				
100.47	101.40	MSCH				
		massive chert				
101.40	110.64	FBBS				
		tectonic breccia basalt				
110.64	137.66	MSBS				
		massive basalt				
137.66	141.97	MSBS	137.66	139.08	N112872	1.42
		massive basalt	139.08	140.51	N112873	1.43
			140.51	141.97	N112874	1.46
141.97	142.89	HECH	141.97	142.89	N112875	0.92
		hematitic chert with pyrite layers				
142.89	150.77	MSBS	142.89	144.36	N112876	1.47
		massive basalt	144.36	145.81	N112877	1.45
			145.81	147.21	N112878	1.40
			147.21	148.99	N112879	1.78
			148.99	150.77	N112880	1.78
150.77	151.25	HECH	150.77	151.25	N112881	0.48
		hematitic chert with pyrite layers				
151.25	156.07	MSBS	151.25	152.83	N112882	1.58
		massive basalt	152.83	154.33	N112883	1.50
			154.33	155.76	N112884	1.43
156.07	171.14	BRBS				
		breccia basalt				
171.14	186.23	BRBS				
		breccia basalt				
186.23	186.23	EOH				

Project: 1642 **Hole Number: ID97-10**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
		casing, no core recovered				
1.22	1.60	OBDH				
		overburden				
1.60	7.00	MSBS				
		broken massive basalt				
7.00	21.30	MSBS				
		broken massive basalt				
21.30	32.00	MSBS				
		massive basalt				
32.00	33.90	MSBS				
		fine grained massive basalt				
33.90	50.60	MSBS				
		epidote altered massive basalt				
50.60	101.15	MSBS	97.23	98.42	N112893	1.19
		massive basalt	98.42	99.83	N112894	1.41
			99.83	101.15	N112895	1.32
101.15	102.10	HECH	101.15	102.10	N112896	0.95
		hematitic chert				
102.10	111.35	MSBS	102.10	103.33	N112897	1.23
		fine grained massive basalt	103.33	104.85	N112898	1.52
			104.85	106.38	N112899	1.53
			108.33	109.83	N112900	1.50
			109.83	111.35	N112901	1.52
111.35	111.55	HEMS	111.35	111.55	N112902	0.20
		broken hematitic mudstone				
111.55	115.27	PHBS	111.55	113.06	N112903	1.51
		porphyritic basalt	113.06	114.40	N112904	1.34
115.27	123.20	BRBS				
		breccia basalt				
123.20	125.75	BRBS				
		altered breccia basalt				
125.75	133.00	BRBS				
		breccia basalt				
133.00	138.80	BRBSh				
		hematitic breccia basalt				
138.80	149.96	BRBS				
		breccia basalt				
149.96	149.96	EOH				

Project: 1642			Hole Number: ID97-11			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.52	CSDH				
casing						
1.52	2.09	OBDH				
overburden						
2.09	4.88	RBCH				
dark grey ribbon chert						
4.88	5.50	MSBS				
massive basalt						
5.50	6.10	MSCH				
green massive chert						
6.10	7.10	MSBS				
weathered massive basalt and chert						
7.10	8.53	MSBS				
limonitic massive basalt						
8.53	9.14	MSCH				
hematitic chert						
9.14	10.15	MSBS				
massive basalt						
10.15	10.85	MSCH				
green massive chert						
10.85	12.63	MSBS				
amygdaloidal massive basalt						
12.63	13.63	MSCH				
red and grey massive chert						
13.63	26.13	MSBS				
massive basalt						
26.13	27.58	MSCH				
fractured red and grey chert						
27.58	55.41	MSBS	51.70	53.02	N112956	1.32
massive basalt			53.02	54.10	N112957	1.08
			54.10	55.41	N112958	1.31
55.41	56.14	MSCH	55.41	56.14	N112959	0.73
red massive chert						
56.14	88.57	MSBS	56.14	57.15	N112960	1.01
fractured chloritic massive basalt			57.15	58.37	N112961	1.22
			58.37	59.48	N112962	1.11
			84.70	85.85	N112905	1.15
			85.85	87.07	N112906	1.22
			87.07	88.57	N112907	1.50
88.57	93.81	PYMS	88.57	89.92	N112908	1.35

From	To	Rocktype & Description	S_from	S_to	Sample	Width
		pyrite and chalcopyrite rich massive sulphides	89.92	91.44	N112909	1.52
			91.44	92.81	N112910	1.37
			92.81	93.88	N112911	0.00
93.81	**98.49**	**PHBS**	93.88	94.49	N112912	0.61
		faulted porphyritic breccia basalt	94.49	95.25	N112913	0.76
			95.25	96.01	N112914	0.76
98.49	**113.39**	**BRBS**	109.20	110.53	N112915	1.33
		breecia basalt	110.53	111.86	N112916	1.33
			111.86	113.39	N112917	1.53
113.39	**114.02**	**CPSG**	113.39	114.02	N112918	0.63
		chalcopyrite stringer sulphides				
114.02	**127.63**	**BRBS**	114.02	115.62	N112919	1.60
		chloritic breccia basalt	115.62	117.13	N112920	1.51
			117.13	118.85	N112921	1.72
			125.91	127.63	N112922	1.72
127.63	**130.45**	**MSBS**	127.63	128.96	N112923	1.33
		fine grained massive basalt	128.96	130.45	N112924	1.49
130.45	**144.26**	**SSSG**	130.45	132.08	N112925	1.63
		stringer sulphides	132.08	133.41	N112926	1.33
			133.41	134.90	N112927	1.49
			134.90	136.50	N112928	1.60
			136.50	137.90	N112929	1.40
			137.90	139.26	N112930	1.36
			139.26	140.70	N112931	1.44
			140.70	142.07	N112932	1.37
			142.07	143.20	N112933	1.13
			143.20	144.26	N112934	1.06
144.26	**163.07**	**BSSG**	144.26	145.69	N112935	1.43
		barren stringer sulphides	145.69	147.07	N112936	1.38
			147.07	148.29	N112937	1.22
			148.29	149.55	N112938	1.26
			149.55	150.88	N112939	1.33
			150.88	152.40	N112940	1.52
			152.40	153.92	N112941	1.52
			153.92	155.45	N112942	1.53
			155.45	156.97	N112943	1.52
			156.97	158.31	N112944	1.34
			158.31	159.68	N112945	1.37
			159.68	161.21	N112946	1.53
			161.21	162.20	N112947	0.99

Project: 1642			Hole Number: ID97-11			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
			162.20	163.07	N112948	0.87
163.07	**168.24**	**SGBS**	163.07	164.59	N112949	1.52
weak stringers in breccia basalt			164.59	166.12	N112950	1.53
			166.12	167.18	N112951	1.06
			167.18	168.24	N112952	1.06
168.24	**177.28**	**BRBS**	168.24	169.62	N112953	1.38
chloritic breccia basalt			169.62	171.24	N112954	1.62
			171.24	172.60	N112955	1.36
177.28	**185.00**	**MSBS**				
massive basalt						
185.00	**186.50**	**MSCH**				
red and grey massive chert						
186.50	**190.20**	**MSBS**				
massive basalt						
190.20	**190.20**	**EOH**				

Project: 1642 **Hole Number: ID97-12**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.10	RBCH				
dark grey ribbon chert						
2.10	6.20	MSBS				
massive basalt						
6.20	10.60	MSBS				
massive basalt						
10.60	11.10	MSCH				
dark grey and red massive chert						
11.10	13.73	MSBS				
massive basalt						
13.73	14.53	MSCH				
red and green massive chert						
14.53	16.74	FLBS				
faulted basalt						
16.74	29.50	MSBS				
massive basalt						
29.50	30.26	MSCH				
ed massive chert						
30.26	33.85	MSBS				
massive basalt						
33.85	34.33	MSCH				
red massive chert						
34.33	37.90	MSBS				
massive basalt						
37.90	40.54	MSCH				
green-grey to pink massive chert						
40.54	45.10	MSBS				
massive basalt						
45.10	45.36	MSCH	45.10	45.36	N112963	0.26
massive red chert						
45.36	65.07	MSBS				
massive basalt						
65.07	66.60	MSBS				
broken massive basalt						
66.60	81.00	MSBS				
massive basalt						
81.00	82.00	MSBS				
broken massive basalt						

From	To	Rocktype & Description	S_from	S_to	Sample	Width
82.00	**89.30**	**MSBS** *massive basalt*	86.06	87.30	N112964	1.24
			87.30	88.69	N112965	1.39
			88.69	89.30	N112966	0.61
89.30	**90.15**	**MSBS** *altered massive basalt*	89.30	90.15	N112967	0.85
90.15	**92.10**	**HECH** *red hematitic chert*	90.15	90.98	N112968	0.83
			90.98	92.10	N112969	1.12
92.10	**94.64**	**PYMS** *semi-massive sulphides*	92.10	93.25	N112970	1.15
			93.25	94.64	N112971	1.39
94.64	**99.30**	**SSSG** *stringer sulphides*	94.64	95.71	N112972	1.07
			95.71	96.93	N112973	1.22
			96.93	98.15	N112974	1.22
			98.15	99.30	N112975	1.15
99.30	**101.70**	**SSSG** *stringer sulphides*	99.30	100.43	N112976	1.13
			100.43	101.70	N112977	1.27
101.70	**112.47**	**SSSG** *stringer sulphides*	101.70	103.33	N112978	1.63
			103.33	104.85	N112979	1.52
			104.85	106.38	N112980	1.53
			106.38	107.90	N112981	1.52
			107.90	109.42	N112982	1.52
			109.42	110.95	N112983	1.53
			110.95	112.47	N112984	1.52
112.47	**120.09**	**SSSG** *stringer sulphides*	112.47	114.00	N112985	1.53
			114.00	115.52	N112986	1.52
			115.52	117.04	N112987	1.52
			117.04	118.57	N112988	1.53
			118.57	120.09	N112989	1.52
120.09	**125.50**	**CPSG** *stringer sulphides*	120.09	121.62	N112990	1.53
			121.62	122.85	N112991	1.23
			122.85	124.10	N112992	1.25
			124.10	125.50	N112993	1.40
125.50	**127.23**	**HESG** *hematitic stringers in breccia basalt*	125.50	126.19	N112994	0.69
			126.19	127.23	N112995	1.04
127.23	**132.20**	**PYSG** *pyrite stringer sulphides*	127.23	128.60	N112996	1.37
			128.60	129.93	N112997	1.33
			129.93	131.03	N112998	1.10
			131.03	132.20	N112999	1.17
132.20	**134.72**	**BRBS** *breccia basalt*	132.20	133.50	N113000	1.30
			133.50	134.72	N113001	1.22
134.72	**137.57**	**BRBS**	134.72	135.97	N113002	1.25

Project: 1642			Hole Number: ID97-12			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
		breccia basalt with 10-15% pyrite	135.97	137.57	N113003	1.60
137.57	**140.62**	**PYMS**	137.57	138.97	N113004	1.40
		pyrite stringer sulphides	138.97	140.62	N113005	1.65
140.62	**141.43**	**BRBS**	140.62	141.43	N113006	0.81
		very altered breccia basalt				
141.43	**146.72**	**CAVN**	141.43	142.95	N113007	1.52
		calcite vein	142.95	144.48	N113008	1.53
			144.48	145.82	N113009	1.34
			145.82	146.72	N113010	0.90
146.72	**147.52**	**BRBS**	146.72	147.52	N113011	0.80
		broken breccia basalt				
147.52	**161.64**	**FLBS**	147.52	148.44	N113012	0.92
		faulted breccia basalt	148.44	149.35	N113013	0.91
161.64	**167.94**	**FLBS**				
		broken breccia basalt				
167.94	**167.94**	**EOH**				

Project: 1642 **Hole Number: ID97-13**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing						
3.05	3.30	OBDH				
overburden						
3.30	4.22	MSBS				
weathered and broken massive basalt						
4.22	6.60	MSBS				
massive basalt						
6.60	8.56	MSCH				
massive red chert						
8.56	24.00	MSBS				
massive basalt						
24.00	24.50	MSCH				
broken massive red chert						
24.50	39.07	MSBS				
massive basalt						
39.07	66.32	MSBS				
massive basalt						
66.32	75.90	MSBS				
broken massive basalt						
75.90	88.62	MSBS	85.04	85.92	N113014	0.88
massive basalt			85.92	87.34	N113015	1.42
			87.34	88.62	N113016	1.28
88.62	89.00	HEMS	88.62	89.00	N113017	0.38
hematitic mudstone with sulphides						
89.00	92.38	PYMS	89.00	90.02	N113018	1.02
massive sulphide breccia			90.02	91.15	N113019	1.13
			91.15	92.38	N113020	1.23
92.38	95.15	PYMS	92.38	93.72	N113021	1.34
massive sulphide breccia			93.72	95.15	N113022	1.43
95.15	101.00	PYMS	95.15	96.29	N113023	1.14
massive sulphides			96.29	97.23	N113024	0.94
			97.23	98.76	N113025	1.53
			98.76	99.97	N113026	1.21
			99.97	101.00	N113027	1.03
101.00	104.12	BSPY	101.00	101.80	N113028	0.80
pyrite-porphyritic breccia basalt			101.80	103.08	N113029	1.28
			103.08	104.12	N113030	1.04
104.12	108.82	PHBS	104.12	105.16	N113031	1.04
porphyritic breccia basalt			105.16	106.68	N113032	1.52

Project: 1642 **Hole Number: ID97-13**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			106.68	107.29	N113033	0.61
			107.29	108.82	N113034	1.53
108.82	120.93	SSSG	108.82	109.78	N113035	0.96
		stringer sulphides in PHBS	109.78	110.95	N113036	1.17
			110.95	112.32	N113037	1.37
			112.32	114.00	N113038	1.68
			114.00	115.52	N113039	1.52
			115.52	117.04	N113040	1.52
			117.04	118.57	N113041	1.53
			118.57	119.79	N113042	1.22
			119.79	120.93	N113043	1.14
120.93	122.55	BRBS	120.93	122.55	N113044	1.62
		slightly altered breccia basalt				
122.55	123.80	GGBS	122.55	123.80	N113045	1.25
		gouged basalt				
123.80	124.66	PYSG	123.80	124.66	N113046	0.86
		very pyritic stringer sulphides				
124.66	127.00	ABSG	124.66	126.19	N113047	1.53
		pale olive green altered basalt	126.19	127.00	N113048	0.81
127.00	127.71	GGBS	127.00	127.71	N113049	0.71
		gouged basalt				
127.71	131.34	ABSG	127.71	129.24	N113050	1.53
		pale olive green altered basalt/stringers	129.24	130.76	N113051	1.52
			130.76	131.34	N113052	0.58
131.34	132.28	GGBS	131.34	132.28	N113053	0.94
		gauged basalt				
132.28	133.28	ABSG	132.28	133.28	N113054	1.00
		altered basalt/stringers				
133.28	141.04	CAVN	133.28	134.15	N113055	0.87
		brecciated calcite vein	134.15	135.33	N113056	1.18
			135.33	136.86	N113057	1.53
			136.86	138.23	N113058	1.37
			138.23	139.75	N113059	1.52
			139.75	141.04	N113060	1.29
141.04	144.48	BRBS	141.04	142.10	N113061	1.06
		breccia basalt	142.10	143.10	N113062	1.00
144.48	149.05	BRBS				
		very broken brecci basalt				
149.05	149.05	EOH				

Project: 1642 **Hole Number: ID97-14**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	**CSDH**				
		casing				
2.44	13.71	**OBDH**				
		polylithic overburden				
13.71	15.88	**RBCH**				
		green-grey ribbon chert				
15.88	20.63	**CBMS**				
		interbedded mudstone and sandstone				
20.63	22.86	**FBCH**				
		faulted breccia and gouge				
22.86	25.94	**MSBS**				
		fractured massive basalt				
25.94	33.45	**MSBS**				
		veined massive basalt				
33.45	33.90	**MSCH**				
		green and red massive chert				
33.90	40.97	**MSBS**				
		massive basalt				
40.97	41.80	**MSCH**				
		maroon massive chert				
41.80	107.14	**MSBS**	103.22	104.25	N113063	1.03
		masive basalt	104.25	105.47	N113064	1.22
			105.47	107.14	N113065	1.67
107.14	109.63	**HECH**	107.14	108.12	N113066	0.98
		pyrite flooded hematitic chert	108.12	108.93	N113067	0.81
			108.93	109.63	N113068	0.70
109.63	114.25	**PYMS**	109.63	111.16	N113069	1.53
		massive pyritic sulphide breccia	111.16	112.78	N113070	1.62
			112.78	114.25	N113071	1.47
114.25	120.92	**PHBS**	114.25	115.82	N113072	1.57
		porphyritic basalt breccia	115.82	117.35	N113073	1.53
			117.35	118.87	N113074	1.52
120.92	148.85	**BRBS**	144.08	145.73	N113075	1.65
		breccia basalt	145.73	147.18	N113076	1.45
			147.18	148.85	N113077	1.67
148.85	174.49	**SSSG**	148.85	150.57	N113078	1.72
		weak stringer sulpides	150.57	151.79	N113079	1.22
			151.79	153.23	N113080	1.44
			153.23	154.53	N113081	1.30
			154.53	156.06	N113082	1.53

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			156.06	157.58	N113083	1.52
			157.58	159.41	N113084	1.83
			159.41	160.93	N113085	1.52
			160.93	162.00	N113086	1.07
			162.00	163.53	N113087	1.53
			163.53	164.99	N113088	1.46
			164.99	166.57	N113089	1.58
			166.57	168.02	N113090	1.45
			168.02	169.57	N113091	1.55
			169.57	170.90	N113092	1.33
			170.90	172.52	N113093	1.62
			172.52	173.51	N113094	0.99
			173.51	174.49	N113098	0.98
174.49	**192.02**	**BRBS**	174.49	175.94	N113095	1.45
breccia basalt			175.94	177.47	N113096	1.53
			177.47	178.95	N113097	1.48
192.02	**192.02**	**EOH**				

Project: 1642 **Hole Number: ID97-14**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
		casing				
2.44	13.71	OBDH				
		polylithic overburden				
13.71	15.88	RBCH				
		green-grey ribbon chert				
15.88	20.63	CBMS				
		interbedded mudstone and sandstone				
20.63	22.86	FBCH				
		faulted breccia and gouge				
22.86	25.94	MSBS				
		fractured massive basalt				
25.94	33.45	MSBS				
		veined massive basalt				
33.45	33.90	MSCH				
		green and red massive chert				
33.90	40.97	MSBS				
		massive basalt				
40.97	41.80	MSCH				
		maroon massive chert				
41.80	107.14	MSBS	103.22	104.25	N113063	1.03
		masive basalt	104.25	105.47	N113064	1.22
			105.47	107.14	N113065	1.67
107.14	109.63	HECH	107.14	108.12	N113066	0.98
		pyrite flooded hematitic chert	108.12	108.93	N113067	0.81
			108.93	109.63	N113068	0.70
109.63	114.25	PYMS	109.63	111.16	N113069	1.53
		massive pyritic sulphide breccia	111.16	112.78	N113070	1.62
			112.78	114.25	N113071	1.47
114.25	120.92	PHBS	114.25	115.82	N113072	1.57
		porphyritic basalt breccia	115.82	117.35	N113073	1.53
			117.35	118.87	N113074	1.52
120.92	148.85	BRBS	144.08	145.73	N113075	1.65
		breccia basalt	145.73	147.18	N113076	1.45
			147.18	148.85	N113077	1.67
148.85	174.49	SSSG	148.85	150.57	N113078	1.72
		weak stringer sulpides	150.57	151.79	N113079	1.22
			151.79	153.23	N113080	1.44
			153.23	154.53	N113081	1.30
			154.53	156.06	N113082	1.53

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			156.06	157.58	N113083	1.52
			157.58	159.41	N113084	1.83
			159.41	160.93	N113085	1.52
			160.93	162.00	N113086	1.07
			162.00	163.53	N113087	1.53
			163.53	164.99	N113088	1.46
			164.99	166.57	N113089	1.58
			166.57	168.02	N113090	1.45
			168.02	169.57	N113091	1.55
			169.57	170.90	N113092	1.33
			170.90	172.52	N113093	1.62
			172.52	173.51	N113094	0.99
			173.51	174.49	N113098	0.98
174.49	**192.02**	**BRBS**	174.49	175.94	N113095	1.45
		breccia basalt	175.94	177.47	N113096	1.53
			177.47	178.95	N113097	1.48
192.02	**192.02**	**EOH**				

Project: 1642 **Hole Number: ID97-15**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	2.12	MSCH				
grey to red massive chert						
2.12	7.60	MSBS				
massive basalt						
7.60	8.77	MSCH				
red massive chert						
8.77	13.30	MSBS				
massive basalt						
13.30	14.27	MSBS				
calcite veined massive basalt						
14.27	15.75	MSBS				
massive basalt						
15.75	17.73	MSCH				
red-grey massive chert						
17.73	27.50	MSBS				
massive basalt						
27.50	37.15	MSBS				
massive basalt						
37.15	43.59	MSBS				
massive basalt						
43.59	45.11	MSBS				
calcite veined massive basalt						
45.11	51.57	MSBS				
massive basalt						
51.57	53.64	MSCH				
red, green, grey massive chert						
53.64	63.12	BRBS				
breccia basalt						
63.12	72.42	MSBS				
massive basalt						
72.42	73.32	MSBS				
epidote-Qz veined massive basalt						
73.32	93.06	MSBS				
massive basalt						
93.06	96.10	CAVN				
brecciated carbonate Qz-vein - Fault zone						
96.10	99.20	PHBS				
porpyritic basalt						

From	To	Rocktype & Description	S_from	S_to	Sample	Width
99.20	101.19	GGBS				
		gauged basalt				
101.19	127.71	FLBS				
		faulted basalt				
127.71	127.71	EOH				

Project: 1642			Hole Number: ID97-16			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing - no core						
3.05	8.69	OBDH				
polylithic overburden						
8.69	46.53	RBCH				
green-grey ribbon chert						
46.53	48.20	GGMS				
carbonaceous fault gouge						
48.20	74.52	MSBS				
massive basalt						
74.52	75.84	MSCH				
red massive chert with basalt bands						
75.84	118.41	MSBS				
massive basalt						
118.41	128.37	BRBS	127.10	128.37	N113099	1.27
breccia basalt						
128.37	128.78	HECH	128.37	128.78	N113100	0.41
hematitic chert						
128.78	130.19	MSBS	128.78	130.19	N113101	1.41
massive basalt						
130.19	130.68	HECH	130.19	130.68	N113102	0.49
hematitic chert						
130.68	135.45	PYMS	130.68	132.29	N113103	1.61
pyritic massive sulphide			132.29	133.88	N113104	1.59
			133.88	135.45	N113105	1.57
135.45	136.23	HECH	135.45	136.23	N113106	0.78
laminated hematitic chert						
136.23	140.24	PHBS	136.23	137.87	N113107	1.64
porphyritic basalt breccia			137.87	139.30	N113108	1.43
140.24	151.12	BRBS				
breccia basalt						
151.12	158.85	BRBS				
tectonic breccia with gouge						
158.85	170.47	BRBS				
breccia basalt						
170.47	171.75	BRBS				
tectonic breccia with gouge						
171.75	183.73	BRBS				
breccia basalt						
183.73	184.04	MSCH				

Project: 1642			Hole Number: ID97-16			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
		green-grey massive chert				
184.04	193.42	MSBS				
		massive basalt				
193.42	193.85	MSCH				
		dark grey massive chert				
193.85	193.85	EOH				

Project: 1642			Hole Number: ID97-16			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing - no core						
3.05	8.69	OBDH				
polylithic overburden						
8.69	46.53	RBCH				
green-grey ribbon chert						
46.53	48.20	GGMS				
carbonaceous fault gouge						
48.20	74.52	MSBS				
massive basalt						
74.52	75.84	MSCH				
red massive chert with basalt bands						
75.84	118.41	MSBS				
massive basalt						
118.41	128.37	BRBS	127.10	128.37	N113099	1.27
breccia basalt						
128.37	128.78	HECH	128.37	128.78	N113100	0.41
hematitic chert						
128.78	130.19	MSBS	128.78	130.19	N113101	1.41
massive basalt						
130.19	130.68	HECH	130.19	130.68	N113102	0.49
hematitic chert						
130.68	135.45	PYMS	130.68	132.29	N113103	1.61
pyritic massive sulphide			132.29	133.88	N113104	1.59
			133.88	135.45	N113105	1.57
135.45	136.23	HECH	135.45	136.23	N113106	0.78
laminated hematitic chert						
136.23	140.24	PHBS	136.23	137.87	N113107	1.64
porphyritic basalt breccia			137.87	139.30	N113108	1.43
140.24	151.12	BRBS				
breccia basalt						
151.12	158.85	BRBS				
tectonic breccia with gouge						
158.85	170.47	BRBS				
breccia basalt						
170.47	171.75	BRBS				
tectonic breccia with gouge						
171.75	183.73	BRBS				
breccia basalt						
183.73	184.04	MSCH				

From	To	Rocktype & Description	S_from	S_to	Sample	Width
		green-grey massive chert				
184.04	193.42	MSBS				
		massive basalt				
193.42	193.85	MSCH				
		dark grey massive chert				
193.85	193.85	EOH				

Project: 1642 **Hole Number: ID97-17**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	10.97	CSDH				
		casing				
10.97	13.60	OBDH				
		overburden				
13.60	18.82	CBMS				
		carbonaceous mudstone interbedded with chert				
18.82	30.15	RBCH				
		green ribbon chert				
30.15	37.40	MSBS				
		massive basalt				
37.40	40.32	MSCH				
		massive red chert				
40.32	65.93	MSBS				
		massive basalt				
65.93	66.95	MSCH				
		massive red chert				
66.95	104.35	MSBS				
		massive basalt				
104.35	110.95	PHBS				
		hematitic porphyrytic breccia basalt				
110.95	116.00	PHBS				
		porphyritic breccia basalt				
116.00	122.17	PHBS				
		hematitic porphyritic breccia basalt				
122.17	124.70	BRBS				
		broken aphanitic breccia basalt				
124.70	132.28	BRBS				
		aphanitic breccia basalt				
132.28	132.28	EOH				

Project: 1642			Hole Number: ID97-18			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
casing						
3.05	12.19	OBDH				
overburden						
12.19	16.10	CBMS				
mudstone interbedded with black RBCH						
16.10	29.26	RBCH				
light green-grey ribbon chert						
29.26	31.09	MSCH				
dark grey massive chert						
31.09	39.20	MSBS				
altered massive basalt						
39.20	59.33	MSBS				
massive basalt						
59.33	86.16	MSBS	84.84	86.16	N113110	1.32
massive basalt						
86.16	86.31	PYMS	86.16	86.31	N113111	0.15
massive sulphides						
86.31	92.15	PHBS	86.31	87.33	N113112	1.02
porphyritic breccia basalt						
92.15	102.72	PHBS				
porphyry rich breccia basalt						
102.72	122.22	BRBS				
breccia basalt						
122.22	144.73	BRBS	140.49	141.88	N113135	1.39
breccia basalt			141.88	143.26	N113113	1.38
			143.26	144.73	N113114	1.47
144.73	149.00	SSSG	144.73	146.30	N113115	1.57
pyritic stringer sulphides			146.30	147.83	N113116	1.53
			147.83	149.00	N113117	1.17
149.00	152.04	BRBS	149.00	150.48	N113118	1.48
breccia basalt			150.48	152.04	N113119	1.56
152.04	168.24	HESG	152.04	153.53	N113120	1.49
hematite rich stringer sulphides			153.53	154.85	N113121	1.32
			154.85	156.05	N113122	1.20
			156.05	157.42	N113123	1.37
			157.42	158.85	N113124	1.43
			158.85	160.02	N113125	1.17
			160.02	161.54	N113126	1.52
			161.54	163.07	N113127	1.53

From	To	Rocktype & Description
168.24	178.31	BRBS *breccia basalt*
178.31	178.31	EOH

S_from	S_to	Sample	Width
163.07	164.59	N113128	1.52
164.59	166.12	N113129	1.53
166.12	167.64	N113130	1.52
167.64	168.24	N113131	0.60
168.24	169.76	N113132	1.52
169.76	170.84	N113133	1.08
170.84	172.21	N113134	1.37

Project: 1642 **Hole Number: ID97-19**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	10.97	CSDH				
		casing				
10.97	22.14	RBCH				
		dark grey ribbon chert				
22.14	32.16	MSCH				
		massive green chert				
32.16	60.60	MSBS				
		massive basalt				
60.60	60.96	MSCH	60.60	60.96	N113136	0.36
		massive red chert with PY				
60.96	64.73	MSBS				
		massive basalt				
64.73	65.75	MSCH	64.73	65.75	N113137	1.02
		massive red chert				
65.75	93.90	MSBS	89.61	91.13	N113138	1.52
		massive basalt	91.13	92.66	N113139	1.53
			92.66	93.90	N113140	1.24
93.90	95.45	PYMS	93.90	95.45	N113141	1.55
		pyritic massive sulphides				
95.45	96.25	PYMS	95.45	96.25	N113142	0.80
		brecciated sulphides				
96.25	111.85	PHBS	96.25	97.65	N113143	1.40
		porpyritic breccia basalt	97.65	98.76	N113144	1.11
			98.76	100.28	N113145	1.52
111.85	142.09	BRBS				
		breccia basalt				
142.09	145.38	BRBS	142.09	142.95	N113146	0.86
		red hematite breccia basalt	142.95	144.48	N113147	1.53
			144.48	145.38	N113148	0.90
145.38	161.14	SSSG	145.38	146.91	N113149	1.53
		stringer sulphides	146.91	148.44	N113150	1.53
			148.44	149.96	N113151	1.52
			149.96	151.49	N113152	1.53
			151.49	153.01	N113153	1.52
			153.01	154.53	N113154	1.52
			154.53	156.06	N113155	1.53
			156.06	157.58	N113156	1.52
			157.58	158.95	N113157	1.37
			158.95	159.72	N113158	0.77
			159.72	161.14	N113159	1.42

Project: 1642 **Hole Number: ID97-19**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
161.14	178.00	BRBS *breccia basalt*	161.14	162.76	N113160	1.62
			162.76	164.29	N113161	1.53
			164.29	165.81	N113162	1.52
178.00	178.00	EOH				

Project: 1642 **Hole Number: ID97-20**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	6.10	CSDH				
casing						
6.10	9.75	OBDH				
overburden						
9.75	16.86	RBCH				
black ribbon chert with mudstone						
16.86	19.91	RBCH				
greenish-grey ribbon chert						
19.91	22.24	RBCH				
black ribbon chert						
22.24	37.23	RBCH				
green-grey and black interbedded ribbon chert						
37.23	86.77	MSBS	82.91	84.12	N113163	1.21
massive basalt			84.12	85.65	N113164	1.53
			85.65	86.77	N113165	1.12
86.77	93.28	PYMS	86.77	87.78	N113166	1.01
pyrite massive sulphides breccia			87.78	89.36	N113167	1.58
			89.36	90.53	N113168	1.17
			90.53	91.90	N113169	1.37
			91.90	93.28	N113170	1.38
93.28	94.32	HEMS	93.28	94.32	N113171	1.04
hematitic mudstone with pyrite bands						
94.32	110.18	PHBS	94.32	95.86	N113172	1.54
porphyritic breccia basalt			95.86	97.54	N113173	1.68
			97.54	99.21	N113174	1.67
110.18	134.32	BRBS	129.84	131.37	N113175	1.53
breccia basalt			131.37	132.82	N113176	1.45
			132.82	134.32	N113177	1.50
134.32	141.13	SGBS	134.32	135.84	N113178	1.52
weak stringers in breccia basalt			135.84	136.86	N113179	1.02
			136.86	138.07	N113180	1.21
			138.07	139.19	N113181	1.12
			139.19	139.90	N113182	0.71
			139.90	141.13	N113183	1.23
141.13	151.95	BRBS	141.13	142.55	N113184	1.42
hematitic breccia basalt			142.55	144.05	N113185	1.50
			144.05	145.55	N113186	1.50
151.95	156.97	BSBS				
reccia basalt						
156.97	156.97	EOH				

Project: 1642 **Hole Number: ID97-21**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	6.10	CSDH				
Casing						
6.10	7.00	OBDH				
Overburden						
7.00	11.58	SDST				
Sandstone						
11.58	22.56	SDST				
Sandstone						
22.56	27.13	CBMS				
Carbonaceous mudstone						
27.13	43.97	GGMS				
Gouged mudstone						
43.97	46.94	CBMS				
Carbonaceous mudstone						
46.94	57.61	MSCG				
Mudstone conglomerate						
57.61	61.73	MSCH				
Broken green massive chert						
61.73	64.23	RBCH				
Ribbon grey chert						
64.23	65.23	CBMS				
Carbonaceous mudstone						
65.23	66.73	RBCH				
Green ribbon bedded chert						
66.73	70.55	RBCH				
Ribbon dark grey chert						
70.55	73.00	GGMS				
Gouged mudstone						
73.00	78.21	RBCH				
Black ribbon chert						
78.21	83.70	GGMS				
Gouged mudstone						
83.70	91.60	FLCH				
Faulted chert						
91.60	95.70	FLBS				
Faulted basalt						
95.70	107.44	MSBS				
Massive basalt						
107.44	113.75	FBBS				
Fault breccia massive basalt						

From	To	Rocktype & Description	S_from	S_to	Sample	Width
113.75	115.84	MSBS				
		Massive basalt				
115.84	116.42	MSCH				
		Massive red chert				
116.42	132.57	FBBS				
		Faulted massive basalt				
132.57	134.12	PHBS				
		Heavilly fractured porphyritic breccia basalt				
134.12	155.45	BRBS				
		Aphanitic breccia basalt				
155.45	155.45	EOH				

Project: 1642 **Hole Number: ID97-22**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.83	CSDH				
		casing				
1.83	2.33	OBDH				
		overburden				
2.33	58.22	RBCH				
		ribbon chert interbedded with sandstone				
58.22	81.00	RBCH				
		black ribbon chert				
81.00	82.80	QZVN				
		quartz vein				
82.80	88.24	RBCH				
		black and greenish-grey chert				
88.24	92.96	MSBS				
		altered massive basalt				
92.96	100.42	MSBS				
		massive basalt				
100.42	114.71	FBBS				
		faulted breccia basalt				
114.71	124.05	MSBS				
		massive basalt				
124.05	132.02	FBBS	128.25	129.59	N113187	1.34
		faulted breccia basalt	129.59	130.87	N113188	1.28
			130.87	132.02	N113189	1.15
132.02	134.44	PYMS	132.02	133.50	N113190	1.48
			133.50	134.77	N113191	0.00
		pyrite massive sulphide breccia				
134.44	145.18	PHBS	134.77	135.08	N113192	0.31
		porphyritic breccia basalt	135.08	136.61	N113193	1.53
			136.61	137.77	N113194	1.16
			137.77	138.99	N113195	1.22
145.18	146.30	BRBS				
		breccia basalt				
146.30	146.30	EOH				

Project: 1642 **Hole Number: ID97-23**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	6.10	CSDH				
		casing				
6.10	10.36	SDST				
		sandstone				
10.36	14.02	SDST				
		sandstone				
14.02	32.10	CBMS				
		carbonaceous mudstone				
32.10	39.40	GGMS				
		gouged mudstone				
39.40	45.20	CBMS				
		broken carbonaceous mudstone				
45.20	47.16	GGMS				
		gouged carbonaceous mudstone				
47.16	55.10	RBCH				
		black and grey ribbon bedded chert				
55.10	65.25	RBCH				
		very broken green ribbon chert				
65.25	69.50	RBCH				
		broken green ribbon chert				
69.50	71.84	RBCH				
		grey to black ribbon chert				
71.84	74.37	MSBS				
		altered massive basalt				
74.37	90.73	MSBS				
		altered massive basalt				
90.73	91.80	MSCH				
		red massive chert				
91.80	94.60	MSBS				
		massive basalt				
94.60	96.38	MSCH				
		massive grey and red chert				
96.38	111.05	MSBS				
		massive basalt				
111.05	113.00	MSCH				
		massive grey and red chert				
113.00	117.77	MSBS				
		massive basalt				
117.77	119.23	MSCH				
		massive red chert				

From	To	Rocktype & Description	S_from	S_to	Sample	Width
119.23	152.88	MSBS				
		massive basalt				
152.88	155.40	MSCH				
		massive red chert				
155.40	174.98	MSBS				
		epidote altered massive basalt				
174.98	176.80	FBBS				
		faulted massive basalt				
176.80	179.53	FBBS				
		faulted porphyritic breccia basalt				
179.53	187.70	FBBS				
		faulted breccia basalt				
187.70	188.94	CAVN				
		fault calcite vein				
188.94	194.26	BRBS				
		aphanitic breccia basalt				
194.26	197.00	FBBS				
		faulted porphyritic breccia basalt				
197.00	201.88	MSBS				
		massive basalt				
201.88	221.40	BRBS				
		aphanitic breccia basalt				
221.40	222.20	CAVN				
		calcite vein				
222.20	249.45	BRBS				
		silicified aphanitic breccia basalt				
249.45	251.96	BRBS				
		aphanitic breccia basalt				
251.96	271.93	BRBS				
		silicified aphanitic breccia basalt				
271.93	271.93	EOH				

Project: 1642 **Hole Number: ID97-24**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	4.27	CSDH				
		casing				
4.27	8.12	RBCH				
		greenish-grey ribbon chert				
8.12	29.57	RBCH				
		black ribbon chert				
29.57	38.45	GGCH				
		gouged and broken ribbon chert				
38.45	60.10	RBCH				
		black ribbon chert				
60.10	94.79	MSBS				
		massive basalt				
94.79	95.94	HECH				
		red massive chert				
95.94	147.93	MSBS				
		massive basalt				
147.93	148.50	MSCH	147.93	148.50	N113219 0	0.57
		massive red chert with mudstone				
148.50	159.41	BRBS				
		breccia basalt				
159.41	159.41	EOH				

Project: 1642 **Hole Number: ID97-25**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	7.92	CSDH				
		casing				
7.92	47.85	RBCH				
		black ribbon chert with sandstone				
47.85	54.30	RBCH				
		greenish-grey and black ribbon chert				
54.30	56.70	MSBS				
		massive altered basalt				
56.70	71.75	RBCH				
		gouged green-grey and black ribbon chert				
71.75	73.90	MSBS				
		altered massive basalt				
73.90	135.14	MSBS				
		massive basalt				
135.14	137.57	MSCH	135.14	136.55	N113720	1.41
		red massive chert	136.55	137.57	N113721	1.02
137.57	151.39	MSBS				
		massive basalt				
151.39	155.10	BRBS				
		tectonic breccia basalt				
155.10	185.62	BRBS				
		breccia basalt				
185.62	185.62	EOH				

Project: 1642 **Hole Number: ID97-26**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	9.45	CSDH				
casing						
9.45	9.75	OBDH				
overburden						
9.75	18.59	LCDH				
lost core - no recovery						
18.59	23.77	RBCH				
dark grey ribbon chert						
23.77	27.43	LCDH				
lost core - no recovery						
27.43	29.26	MSCH				
green massive chert						
29.26	33.80	GGCH				
fault gouge with chert clasts						
33.80	88.33	MSBS	83.49	85.03	N113294	1.54
massive basalt			85.03	86.67	N113295	1.64
			86.67	88.33	N113296	1.66
88.33	88.58	HECH	88.33	88.58	N113297	0.25
hematitic chert						
88.58	91.70	PYMS	88.58	90.19	N113298	1.61
pyritic massive sulphide breccia			90.19	91.70	N113299	1.51
91.70	94.18	PHBS	91.70	92.96	N113300	1.26
porphyritic basalt breccia			92.96	94.18	N113301	1.22
94.18	164.59	BRBS	94.18	95.55	N113302	1.37
breccia basalt						
164.59	164.59	EOH				

Project: 1642 **Hole Number: ID97-27**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	8.80	OBDH				
overburden						
8.80	9.51	MSBS				
massive basalt						
9.51	10.37	MSCH				
red massive chert						
10.37	17.18	MSBS				
massive basalt						
17.18	21.03	MSCH				
red and grey massive chert						
21.03	45.60	MSBS				
massive basalt						
45.60	46.70	PHBS				
porphyritic breecia basalt						
46.70	49.99	FLBS				
faulted and gouged breccia basalt						
49.99	93.94	BRBS				
breccia basalt						
93.94	110.03	MSBS				
massive basalt						
110.03	110.03	EOH				

Project: 1642			Hole Number: ID97-28			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	4.72	MSBS				
epidote altered broken massive basalt						
4.72	5.68	MSCH				
grey massive chert						
5.68	24.23	MSBS				
epidote altered massive basalt						
24.23	24.78	CRVN				
carbonate-quartz vein						
24.78	67.12	MSBS				
epidote altered massive basalt						
67.12	69.66	BRBS				
breccia basalt						
69.66	76.62	PHBS				
porphyritic breccia basalt						
76.62	93.42	BRBS				
breccia basalt						
93.42	94.66	BRBS	93.42	94.66	N113371	1.24
breccia basalt						
94.66	101.46	BRBS	99.94	100.60	N113372	0.66
breccia basalt			100.60	101.46	N113373	0.86
101.46	107.75	BSPY	101.46	102.76	N113374	1.30
pyrite with basalt fragments			102.76	104.01	N113375	1.25
			104.01	104.85	N113376	0.84
			104.85	106.38	N113377	1.53
			106.38	107.75	N113378	1.37
107.75	122.00	SSSG	107.75	109.35	N113379	1.60
stringer sulphides			109.35	110.95	N113380	1.60
			110.95	112.32	N113381	1.37
			112.32	113.08	N113382	0.76
			113.08	114.60	N113383	1.52
			114.60	115.82	N113384	1.22
			115.82	117.30	N113385	1.48
			117.30	118.87	N113386	1.57
			118.87	120.09	N113387	1.22
			120.09	120.70	N113388	0.61
			120.70	122.00	N113389	1.30
122.00	126.24	SSSG	122.00	123.14	N113390	1.14
stringer sulphides			123.14	124.36	N113391	1.22

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			124.36	125.27	N113392	0.91
			125.27	126.24	N113393	0.97
126.24	**127.40**	**PYMS**	126.24	127.40	N113394	1.16
		semi-massive sulphides				
127.40	**128.47**	**SGBS**	127.40	128.47	N113395	1.07
		weak stringer sulphides				
128.47	**131.15**	**PYMS**	128.47	129.24	N113396	0.77
		semi-massive sulphides	129.24	130.26	N113397	1.02
			130.26	131.15	N113398	0.89
131.15	**133.72**	**SGBS**	131.15	132.28	N113399	1.13
		weak stringer sulphides	132.28	133.72	N113400	1.44
133.72	**137.55**	**FLBS**	133.72	134.87	N113401	1.15
		faulted basalt	134.87	136.25	N113402	1.38
137.55	**140.86**	**SHBS**				
		sheared basalt				
140.86	**145.69**	**MSBS**				
		massive basalt				
145.69	**145.69**	**EOH**				

Project: 1642 **Hole Number: ID97-29**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	3.05	CSDH				
		casing				
3.05	5.80	OBDH				
		overburden				
5.80	8.23	MSBS				
		massive basalt				
8.23	9.30	HEMS				
		hematitic mudstone				
9.30	12.71	MSBS				
		massive basalt				
12.71	45.91	MSBS				
		massive basalt				
45.91	50.00	PHBS				
		porphyritic breccia basalt				
50.00	53.54	PHBS				
		altered breccia basalt				
53.54	58.74	PHBS				
		porphyritic breecia basalt				
58.74	63.09	BRBS				
		breccia basalt				
63.09	63.09	EOH				

Project: 1642 **Hole Number: ID97-30**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	OBDH *overburden*				
1.22	5.08	MSBS *massive basalt*				
5.08	20.20	MSBS *massive basalt*	17.83	18.90	N113403	1.07
			18.90	19.17	N113404	0.27
20.20	24.84	MSBS *massive basalt*	23.77	24.84	N113405	1.07
24.84	29.30	FLBS *faulted massive basalt*	24.84	25.76	N113406	0.92
			25.76	27.13	N113407	1.37
			27.13	28.65	N113408	1.52
			28.65	29.30	N113418	0.65
29.30	29.90	HEMS *broken hematitic mudstone*	29.30	29.90	N113409	0.60
29.90	39.65	PYMS *massive sulphides*	29.90	30.66	N113410	0.76
			30.66	31.70	N113411	1.04
			31.70	33.22	N113412	1.52
			33.22	34.75	N113413	1.53
			34.75	36.27	N113414	1.52
			36.27	37.80	N113415	1.53
			37.80	38.94	N113416	1.14
			38.94	39.65	N113417	0.71
39.65	51.66	FLBS *faulted massive basalt*	39.65	41.72	N113419	2.07
			41.72	42.92	N113420	1.20
			42.92	43.89	N113421	0.97
			43.89	44.96	N113422	1.07
51.66	52.70	MSBS *massive basalt*				
52.70	55.80	FLBS *clay altered faulted basalt*				
55.80	56.95	PHBS *broken porphyritic basalt*				
56.95	69.80	PHBS *porphyritic basalt*				
69.80	81.76	BRBS *breccia basalt*	80.92	81.76	N113423	0.84
81.76	83.76	SSSG *stringer sulphides*	81.76	82.45	N113424	0.69
			82.45	83.76	N113425	1.31
83.76	85.55	PHBS *porphyritic basalt*	83.76	84.73	N113426	0.97

From	To	Rocktype & Description	S_from	S_to	Sample	Width
85.55	**89.20**	**BRBS**	87.63	88.39	N113427	0.76
breccia basalt			88.39	89.20	N113428	0.81
89.20	**91.05**	**SGBS**	89.20	90.04	N113429	0.84
weak stringer sulphides			90.04	91.05	N113430	1.01
91.05	**103.02**	**BRBS**	91.05	92.66	N113431	1.61
breccia basalt						
103.02	**103.02**	**EOH**				

Project: 1642 **Hole Number: ID97-31**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
		casing				
2.44	6.40	MSBS				
		massive basalt				
6.40	16.50	FLBS				
		faulted and gouged massive basalt				
16.50	46.02	MSBS	43.28	44.50	N113751	1.22
		massive basalt	44.50	46.02	N113452	1.52
46.02	46.65	PYMS	46.02	46.65	N113453	0.63
		massive pyritic sulphide				
46.65	47.83	FLBS	46.65	47.83	N113454	1.18
		faulted and gouged breccia basalt				
47.83	58.83	PHBS	47.83	49.07	N113752	1.24
		porphyritic breccia basalt	49.07	50.29	N113753	1.22
			50.29	52.12	N113754	1.83
58.83	64.82	BRBS	63.38	64.82	N113451	1.44
		breccia basalt				
64.82	81.23	BRBS	64.82	66.14	N113432	1.32
		breccia basalt with weak pyrite	66.14	67.36	N113433	1.22
			67.36	68.88	N113434	1.52
			68.88	70.41	N113435	1.53
			70.41	71.93	N113436	1.52
			71.93	73.46	N113437	1.53
			73.46	74.98	N113438	1.52
			74.98	76.50	N113439	1.52
			76.50	78.03	N113440	1.53
			78.03	79.25	N113441	1.22
			79.25	80.16	N113442	0.91
			80.16	81.28	N113443	0.00
81.23	86.05	SGBS	81.28	82.68	N113444	1.40
		breccia basalt with stringers in matrix	82.68	84.12	N113445	1.44
			84.12	85.07	N113446	0.95
			85.07	86.05	N113447	0.98
86.05	92.51	BRBS	86.05	87.17	N113448	1.12
		breccia basalt	87.17	88.85	N113449	1.68
			88.85	90.37	N113450	1.52
92.51	100.89	MSBS				
		massive basalt				
100.89	100.89	EOH				

Project: 1642 **Hole Number: ID97-32**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	9.14	CSDH				
		casing				
9.14	11.30	OBDH				
		overburden				
11.30	13.50	SDST				
		sandstone				
13.50	15.54	MSCH				
		grey to bblack massive chert				
15.54	19.51	MSCH				
		massive grey chert				
19.51	41.45	RBCH				
		ribbon bedded chert				
41.45	45.83	FLMS				
		faulted mudstone				
45.83	49.07	FLCH				
		faulted dark grey chert				
49.07	59.74	FLCH				
		faulted green chert				
59.74	61.26	FLBS				
		faulted massive basalt				
61.26	72.54	MSBS				
		heavilly fractured massive basalt				
72.54	78.68	MSBS				
		massive basalt				
78.68	81.44	PHBS				
		porphyrytic basalt				
81.44	93.67	BRBS				
		breccia basalt				
93.67	111.25	BRBS				
		breccia basalt				
111.25	111.25	EOH				

Project: 1642			Hole Number: ID97-33			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	9.76	CSDH				
casing						
9.76	10.06	OBDH				
overburden						
10.06	30.48	SDST				
sandstone with carbonceous mudstone						
30.48	37.10	RBCH				
grey to black ribbon chert						
37.10	46.94	SDST				
sandstone with carboneous mudstone						
46.94	54.97	RBCH				
grey to black ribbon chert						
54.97	58.83	FLMS				
faulted mudstone						
58.83	59.74	SDST				
sandstone						
59.74	63.00	GGCG				
gouged mudstone conglomerate						
63.00	64.31	RBCH				
reen ribbon chert						
64.31	79.55	RBCH				
grey to black ribbon chert						
79.55	90.65	RBCH				
green ribbon chert						
90.65	98.33	RBCH				
grey ribbon chert						
98.33	99.74	MSBS				
altered broken massive basalt						
99.74	101.04	MSCH				
broken massive grey chert						
101.04	113.00	MSBS				
teconized massive basalt						
113.00	114.30	MSCH				
massive red chert						
114.30	124.55	MSBS				
massive basalt						
124.55	132.39	MSBS				
teconized massive basalt						
32.39	134.02	MSCH				
broken massive red chert						

From	To	Rocktype & Description	S_from	S_to	Sample	Width
134.02	135.44	MSBS				
		teconized massive basalt				
135.44	137.02	MSCH				
		massive black-red chert				
137.02	141.78	MSBS				
		tectonized massive basalt				
141.78	142.20	MSCH				
		grey and red massive chert				
142.20	143.70	MSBS				
		tectonized massive basalt				
143.70	151.67	PHBS				
		tectonized porphyritic basalt				
151.67	158.80	BRBS				
		heavily fractured breccia basalt				
158.80	158.80	EOH				

Project: 1642 **Hole Number: ID97-34**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	2.62	OBDH				
overburden						
2.62	4.90	MSBS				
extremelly broken massive basalt						
4.90	5.39	MSBS				
massive basalt with limonite soil						
5.39	15.54	MSBS				
broken massive basalt						
15.54	23.26	MSBS				
epidote altered massive basalt						
23.26	23.74	MSCH				
calcite veined red massive shert						
23.74	26.15	MSBS				
calcite veined massive basalt						
26.15	26.63	GGBS				
gouged basalt						
26.63	29.82	MSBS				
massive basalt						
29.82	55.47	MSBS				
massive basalt						
55.47	57.61	MSBS				
massive basalt						
57.61	67.90	BRBS				
breccia basalt						
67.90	68.06	PYMS	67.90	68.06	N113455	0.16
massive sulfides						
68.06	72.04	PHBS				
porphyrytic basalt						
72.04	90.18	BRBS	88.70	90.18	N113456	1.48
breccia basalt						
90.18	90.61	PYMS	90.18	90.61	N113457	0.43
massive sulfides						
90.61	91.83	PHBS	90.61	91.83	N113458	1.22
porphyrytic basalt						
91.83	116.75	BRBS				
breccia basalt						
116.75	127.78	BRBS				
breccia basalt						

Project: 1642			Hole Number: ID97-34			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
127.78	133.33	BRBS	132.03	133.33	N113459	1.30
altered breccia basalt						
133.33	141.40	SSSG	133.33	134.76	N113460	1.43
stringer sulfides			134.76	135.94	N113461	1.18
			135.94	137.46	N113462	1.52
			137.46	138.99	N113463	1.53
			138.99	140.51	N113464	1.52
			140.51	141.40	N113465	0.89
141.40	150.78	SSSG	141.40	142.18	N113466	0.78
stringer sulfides			142.18	143.26	N113467	1.08
			143.26	144.58	N113468	1.32
			144.58	145.39	N113469	0.81
			145.39	146.61	N113470	1.22
			146.61	147.68	N113471	1.07
			147.68	149.05	N113472	1.37
			149.05	149.96	N113473	0.91
			149.96	150.78	N113474	0.82
150.78	153.30	SGBS	150.78	151.49	N113475	0.71
very weak stringer sulfides			151.49	152.50	N113476	1.01
			152.50	153.30	N113477	0.80
153.30	168.55	BRBS	153.30	154.23	N113478	0.93
breccia basalt						
168.55	168.55	EOH				

Project: 1642 **Hole Number: ID97-35**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	2.44	CSDH				
casing						
2.44	9.04	MSBS	2.44	3.66	N113482	1.22
weathered massive basalt			3.66	4.88	N113483	1.22
			4.88	6.40	N113484	1.52
			6.40	7.92	N113485	1.52
			7.92	9.04	N113486	1.12
9.04	25.00	MSBS				
massive basalt						
25.00	89.00	BRBS				
breccia basalt						
89.00	89.00	EOH				

Project: 1642			Hole Number: ID97-36			
From	To	Rocktype & Description	S_from	S_to	Sample	Width
0.00	1.22	CSDH				
casing						
1.22	1.60	OBDH				
overburden						
1.60	16.20	MSBS				
weathered massive basalt						
16.20	26.95	MSBS				
massive basalt						
26.95	29.11	MSBS				
veined massive basalt						
29.11	40.00	MSBS	32.45	36.33	N113885	3.88
massive basalt			36.33	36.73	N113886	0.40
40.00	41.00	MSCH	40.00	41.00	N113887	1.00
massive red chert						
41.00	68.60	MSBS				
massive basalt						
68.60	71.00	MSBS				
fractured and veined massive basalt						
71.00	79.55	MSBS	76.66	78.33	N113888	1.67
massive basalt			78.33	79.55	N113889	1.22
79.55	80.40	HECH	79.55	80.40	N113890	0.85
hematitic chert						
80.40	81.22	PYMS	80.40	81.22	N113891	0.82
massive sulphides						
81.22	83.40	PYMS	81.22	82.32	N113892	1.10
massive sulphides			82.32	83.40	N113893	1.08
83.40	99.30	PYMS	83.40	84.43	N113894	1.03
massive sulphides			84.43	85.95	N113895	1.52
			85.95	87.48	N113896	1.53
			87.48	89.00	N113897	1.52
			89.00	90.53	N113898	1.53
			90.53	91.59	N113899	1.06
			91.59	93.12	N113900	1.53
			93.12	94.64	N114054	1.52
			94.64	96.16	N114055	1.52
			96.16	97.84	N114056	1.68
			97.84	99.30	N114057	1.46
99.30	107.00	PHBS	99.30	100.89	N114058	1.59
porphyritic basalt			100.89	102.41	N114059	1.52
			102.41	104.09	N114060	1.68

Project: 1642 **Hole Number: ID97-36**

From	To	Rocktype & Description	S_from	S_to	Sample	Width
			104.09	105.46	N114061	1.37
			105.46	107.00	N114062	1.54
107.00	112.15	HESG	107.00	108.51	N114063	1.51
		hematite rich stringer sulpides	108.51	110.33	N114064	1.82
			110.33	112.15	N114065	1.82
112.15	117.65	HESG	112.15	113.08	N114066	0.93
		hematite rich stringer sulpides	113.08	114.60	N114067	1.52
			114.60	116.13	N114068	1.53
			116.13	117.65	N114069	1.52
117.65	135.95	HESG	117.65	119.18	N114070	1.53
		hematite rich stringer sulpides	119.18	120.70	N114071	1.52
			120.70	122.22	N114072	1.52
			122.22	124.21	N114073	1.99
			124.21	125.57	N114074	1.36
			125.57	127.10	N114075	1.53
			127.10	128.63	N114076	1.53
			128.63	130.15	N114077	1.52
			130.15	131.67	N114078	1.52
			131.67	133.20	N114079	1.53
			133.20	134.72	N114080	1.52
			134.72	135.95	N114081	1.23
135.95	142.34	SSSG	135.95	137.77	N114082	1.82
		stringer sulphides	137.77	139.29	N114083	1.52
			139.29	140.82	N114084	1.53
			140.82	142.34	N114085	1.52
142.34	147.57	SSSG	142.34	143.87	N114086	1.53
		stringer sulphides	143.87	145.39	N114087	1.52
			145.39	146.91	N114088	1.52
			146.91	147.57	N114089	0.66
147.57	169.90	MSBS	147.57	148.44	N114090	0.87
		massive basalt	148.44	149.96	N114091	1.52
169.90	173.41	MSBS				
		veined massive basalt				
173.41	175.41	MSBS				
		massive basalt				
175.41	175.41	EOH				

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