Daiwan Engineering Ltd.
1030-609 Granville Street, Vancouver, B. C. Canada. V7Y 1G5
Phone: (604) 688-1508

LOG NO: 0607 RD.
ACTION:
FILE NO:

ASSESSMENT REPORT ON THE

MCINTOSH DRILLING PROGRAM

"MAC GROUPS" CLAIMS

NORTHERN VANCOUVER ISLAND

BRITISH COLUMBIA, CANADA

LOG NO: 12-24 RD
ACTION: Date received back from amendment
FILE NO:

SUB-RECORDER
RECEIVED
JUN 2 6 1990
M.R. # ..... $.....
VANCOUVER, B.C.

NTS 92L/12

Latitude / 50°40' N

Longitude / 127°50' W

For

Moraga Resources Ltd.

1030 - 609 Granville Street
Vancouver, British Columbia
V7Y 1G5

By

Gary A. Sutton

Peter G. Dasler

June 15, 1990

GEOLOGICAL BRANCH
ASSESSMENT REPORT
20,117

TABLE OF CONTENTS

	Page
SUMMARY	2
INTRODUCTION	3
LOCATION AND ACCESS	3
TOPOGRAPHY AND VEGETATION	3
PROPERTY DESCRIPTION	4
HISTORY	4
REGIONAL GEOLOGY	6
REGIONAL MINERALIZATION	10
PROPERTY GEOLOGY	11
DRILL PROGRAM SUMMARY	11
CONCLUSIONS	12
RECOMMENDATIONS	12
CERTIFICATE OF EXPENDITURES	13
CLAIM GROUP INFORMATION	14
CERTIFICATE OF QUALIFICATIONS	15
REFERENCES	17

FIGURES

Figure 1 - Location Map	Following Page 2
Figure 2 - Property Map	Following Page 3
Figure 3 - Claim Map	Following Page 4
Figure 4 - Mineral Deposits of the Insular Belt	Following Page 5
Figure 5 - Regional Geology	Following Page 6
Figure 6 - Property Geology	Following Page 9
Figure 6a - Geology - Alteration Zones	Following Page 10
Figure 7 - Hushamu-McIntosh Mountain Drill Sites	Following Page 10

APPENDICES

Appendix 1 - Claim Data-Mac Group
Appendix 2 - Assay Certificates
Appendix 3 - Drill Logs
Appendix 4 - Drill Hole Graphs

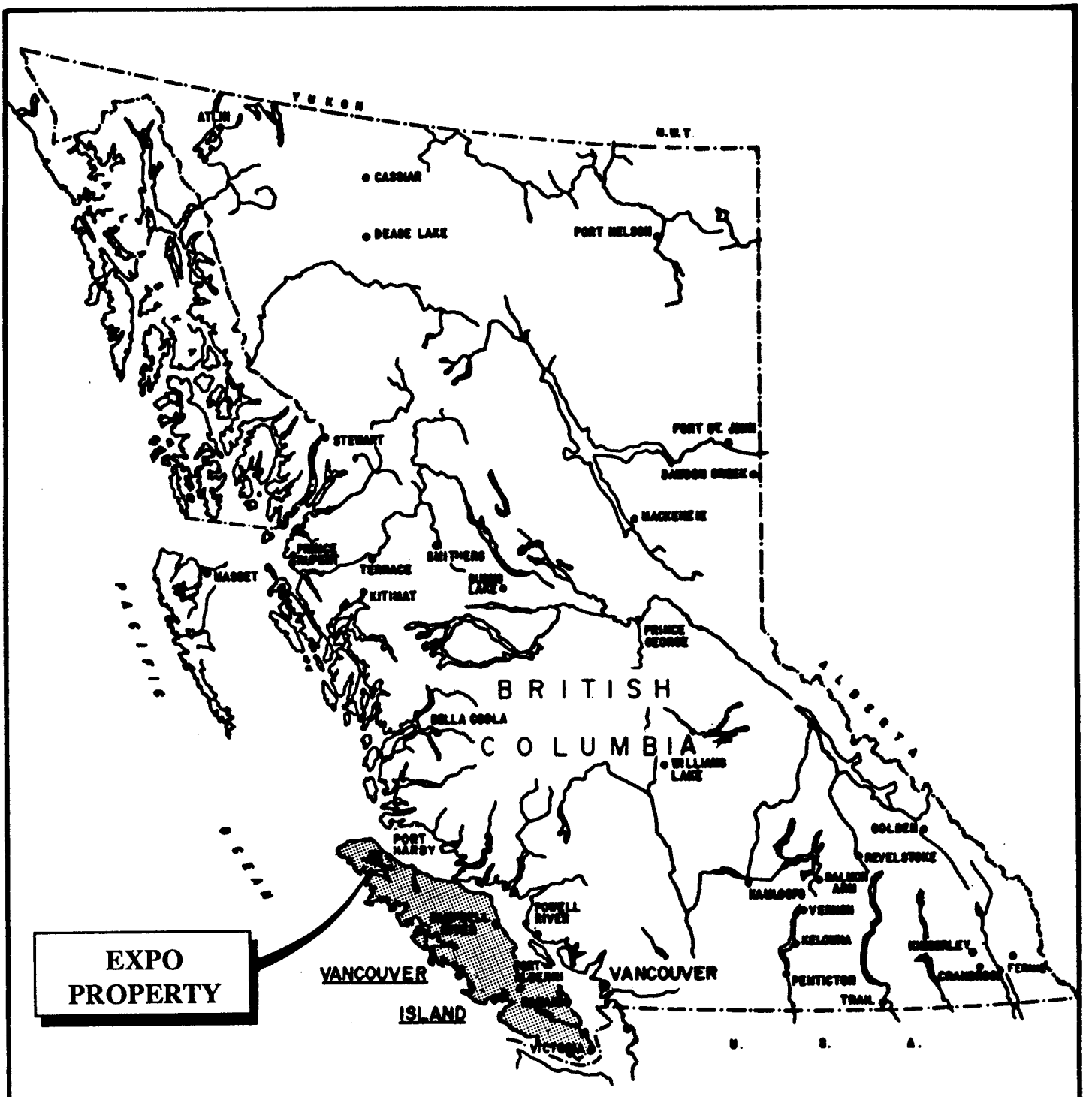
SUMMARY

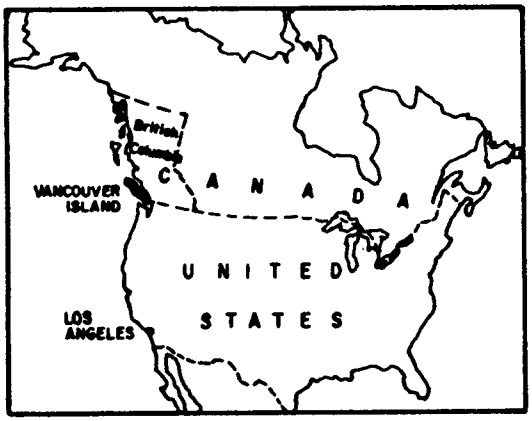
Between April 18 and May 27, 1990 Daiwan Engineering Ltd. supervised a drill program of 1823.6 metres (5981 feet) located on McIntosh Mountain, immediately south of the Hushamu Copper-Gold deposit. The program consisted of 5 new drill holes and the deepening of an existing drill hole.

The drill program was successful in defining two zones of copper mineralization beneath siliceous, pyrophyllite breccias which cap McIntosh Mountain.

This drill program extended the geological boundaries of the Hushamu deposit.

A total of $ 308,878.98 was spent on this drill program between February 2 and June 15, 1990 and is claimed for assessment.





MORAGA RESOURCES LTD.

EXPO PROJECT

NANAIMO MINING DIVISION, B.C.

MCINTOSH GROUP

LOCATION MAP

DAIWAN ENGINEERING LTD.

SCALE	DATE	FIG.
1: 8,000,000	June '90	1

INTRODUCTION

Mr. Maurice Young, president of Moraga Resources Ltd. requested Daiwan Engineering Ltd. to conduct a drilling program on the Expo property in the McIntosh Mountain area near Holberg, British Columbia. The program was designed to further investigate mineralization up to 900 metres south of the Hushamu copper/gold deposit.

The split core samples were shipped by bus to Chemex Labs in Vancouver, B.C. The samples were ground to -80 mesh then .500 gm was digested in 3ml 3-1-2 HCL-HN03-H2O at 95°C for one hour then diluted to 10ml with water and analyzed by ICP methods. Gold analysis was by acid leach with an AA finish from a 10gm sample.

LOCATION AND ACCESS

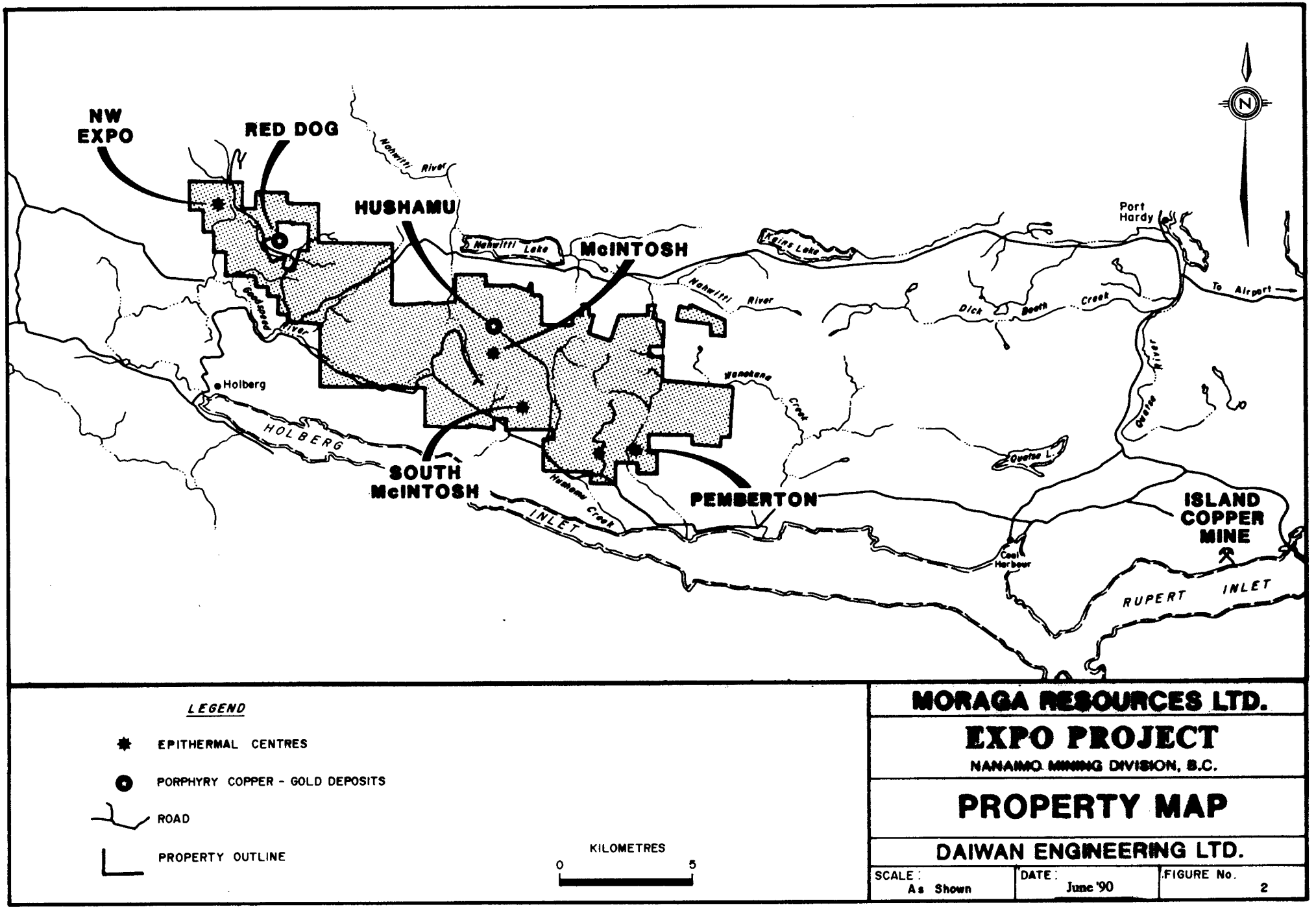
The Expo property is located on northern Vancouver Island, approximately 360 km (225 miles) northwest of Vancouver, British Columbia, Canada (Figure 1). Locally this large claim group covers a 20 km (13 mile) stretch of ground immediately north, and parallel to the west end of Holberg Inlet on N.T.S. topographic map 92L/12. The Hushamu claim group consist of 97 contiguous 2-post claims in the centre of the Expo property (see Figure 2). Most areas of the property can be reached by well maintained logging roads and forest tracks. The main access to the claim block is by forest road "Wanokana Main" which commences on the outskirts of Coal Harbour.

Regular Boeing 737 or Dash 7 air service is provided by both Air BC and Time Air from Vancouver to Port Hardy, each on a twice daily schedule. Alternately, there is good highway access, with travel from Vancouver taking 7 hours.

Port Hardy is the local commercial centre, but there are forestry and fishing centres at Coal Harbour and Holberg.

TOPOGRAPHY AND VEGETATION

The property is characterized by many low, northwest to westerly trending hills and ridges bounded by narrow deeply incised valleys and steep slopes. Elevations range from sea level to over 600 metres (2,000 ft). Within the claim block ridge tops are commonly about 300 metres (1,000 ft) above valley bottom. The property is within N.T.S. topographic map 92L/12.



MORAGA RESOURCES LTD.

EXPO PROJECT

NANAIMO MINING DIVISION, B.C.

PROPERTY MAP

DAIWAN ENGINEERING LTD.

SCALE:	DATE:	FIGURE No.
As Shown	June '90	2

The claims are located within an active logging area, consequently forest cover varies from mature stands of fir, hemlock, spruce and cedar to dense second growth or to open clear-cut areas of recent logging. Some of the ridge tops are fairly open with only stunted evergreens. Low areas, especially along creeks have thick brush and berry bushes.

Rock exposure is well defined in the areas of high relief, and on the higher ridges. However, thick humus development on the forested slopes and scattered residual glacial gravels in the valley bottoms restrict geological mapping in these areas.

PROPERTY DESCRIPTION

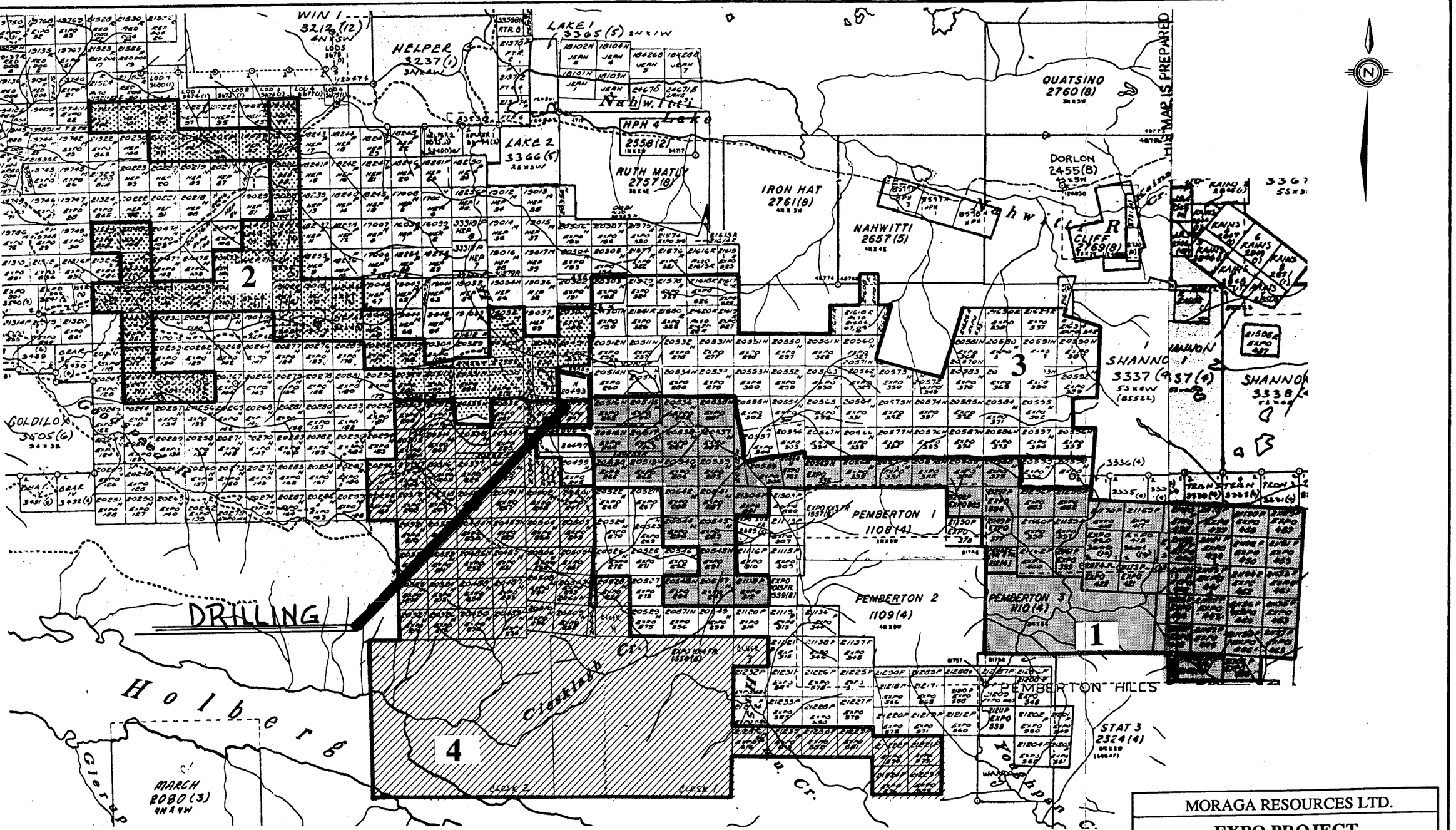
The Mac Groups consists of 243 contiguous 2 post claims and 55 contiguous 4 post claims in the Nanaimo Mining Division. The Mac 1 Group consists of 52 contiguous 2 post claims and 15 contiguous 4 post claims. The Mac 2 Group consists of 57 contiguous 2 post claims. The Mac 3 Group consists of 74 contiguous 2 post claims. The Mac 4 Group consists of 60 contiguous 2 post claims and 40 contiguous 4 post claims. A complete list of the claims can be found in Appendix 1.

HISTORY

Northern Vancouver Island has been intermittently explored since the early 1800s. Between 1849 and 1920 several attempts were made at mining coal in the Port Hardy area. These operations failed due to the poor quality of coal. In the early 1900s, minor coal was mined at Coal Harbour, located on the north shore of Holberg Inlet.

Copper was discovered in 1911 at Benson Lake, 25 miles southeast of Port Hardy. This property, now known as Coast Copper Mine, was acquired by Cominco in 1916. They carried out considerable underground development work, but closed down in 1931, remaining idle until 1960. It was then actively mined between 1962-1972 producing copper and iron concentrates which were shipped to Japan.

Magnetite occurrences were located in the Benson Lake area in 1897, but were considered of interest only for their copper content until the early 1950s. They were explored for their iron content between 1950-56, then mined until 1967 when the operation ceased. Iron concentrates were also shipped to Japan.



MAC 1

MAC 2

MAC 3

MAC 4

SCALE

1 .5 0 1 2 3

km

NTS 92L/12

MORAGA RESOURCES LTD.

EXPO PROJECT

NANAIMO MINING DIVISION, B.C.

MCINTOSH GROUP

CLAIM MAP

DAIWAN ENGINEERING LTD.

SCALE	DATE	FIG.
1 : 50,000	June '90	3

One magnetic anomaly of fairly large areal extent was recorded on the eastern end of Rupert Inlet. Diligent prospecting in this area located a number of poorly exposed copper occurrences. A large number of claims were located in 1966 and subsequently the property was acquired by Utah Construction and Mining Company, now BHP-Utah Mines Ltd. Over the years, they added to the claim block and conducted extensive geological-geochemical-geophysical surveys and diamond drilling throughout the claim block. This work resulted in locating the large copper-molybdenum deposit which was developed into Island Copper Mine (Figure 3). The mine commenced production in October 1971. Production to 1987 has been in excess of 200 million tonnes milled, for concentrate sales of 753,000 tonnes of copper, 23.1 million grams gold, 168 million grams silver, and 15.3 tonnes molybdenum[14].

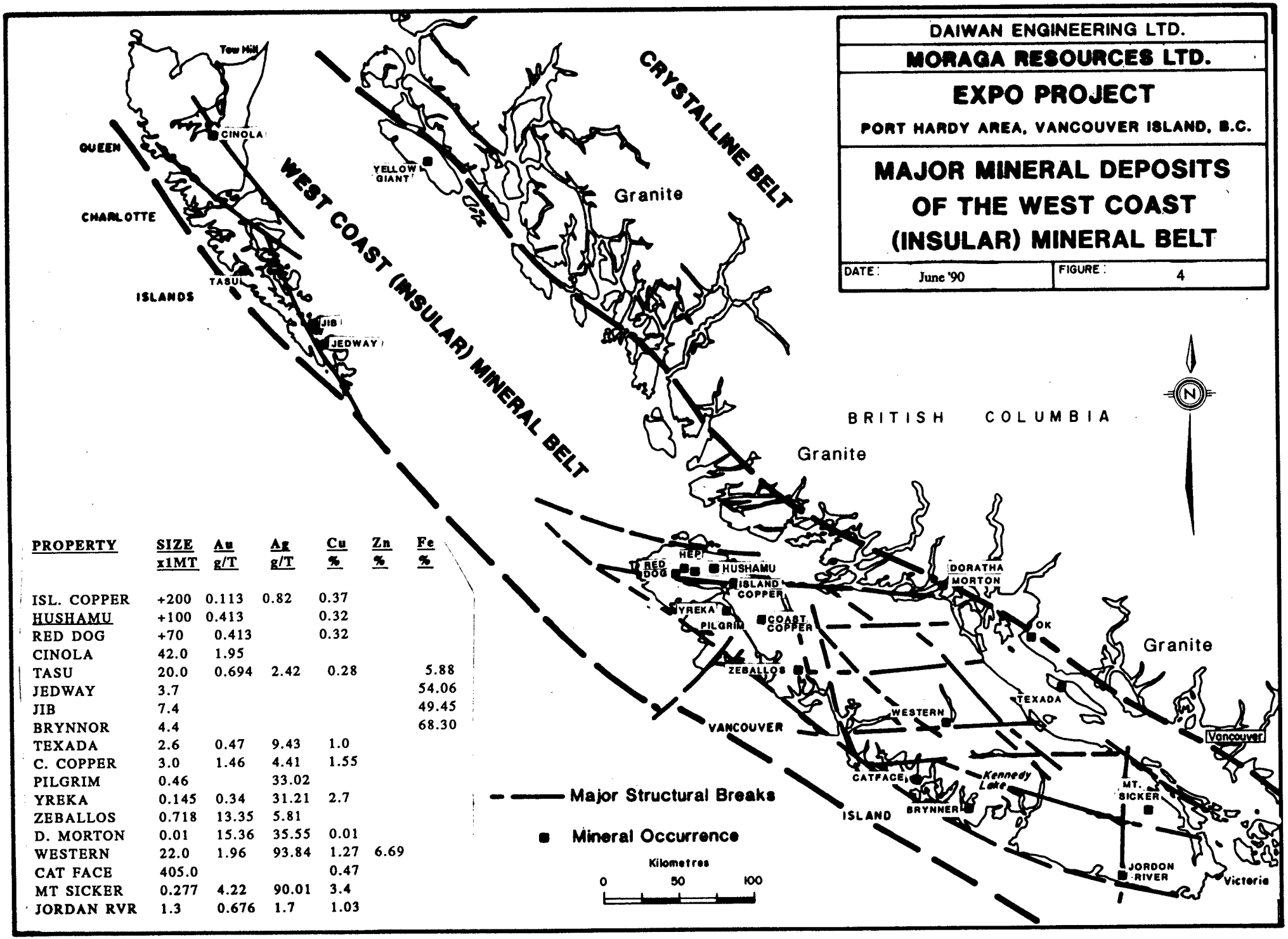
With the discovery of significant copper mineralization on the Utah property, a great deal of interest was generated in the area by individuals and companies searching for copper. Many copper occurrences were located but none were found to be economic.

During the height of the exploration activity, Utah Mines Ltd. controlled most of the ground extending from the east end of Rupert Inlet to the west end of Holberg Inlet. Their properties included the large block of claims covering the Island Copper deposit, as well as the favourable geology on trend to the northwest (most of the present Expo group). After exploring the area extensively to 1975, Utah dropped some of the claims but retained the Expo group. Exploration on these claims had located a large area of low grade copper-molybdenum mineralization (the Hushamu zone) estimated to contain 58,420,000 mineable tonnes grading 0.32% Cu, 0.008% Mo and 413 ppb gold with a stripping ratio of 2.21:1. The drill indicated reserve for the deposit is over 100 million tonnes at the same grade, but higher stripping ratio. [4]

A number of other alteration zones, similar to that at Island Copper Mine and the Hushamu zone, were investigated. While some were mineralized, they were not significant enough at the time to warrant further development.

The Hushamu deposit, and these other alteration zones, are the targets for Moraga's gold and copper exploration. The urgency for developing a further copper deposit in the area is prompted by the expected closure of the Island Copper Mine in 1996 due to the exhaustion of the pit reserves.

Moraga has completed two preliminary phases of exploration since obtaining the property option. The first groundwork was a Downhole Pulse Electromagnetic Survey of DDH EC-158 on Pemberton Hills. This survey indicated a sheet-like sulphide horizon with a significantly more responsive sulphide zone to the north-northwest of the present drillhole. This is awaiting further fieldwork.



PROPERTY	SIZE x1MT	Au g/T	Ag g/T	Cu %	Zn %	Fe %
ISL. COPPER	+200	0.113	0.82	0.37		
HUSHAMU	+100	0.413		0.32		
RED DOG	+70	0.413		0.32		
CINOLA	42.0	1.95				
TASU	20.0	0.694	2.42	0.28		5.88
JEDWAY	3.7					54.06
JIB	7.4					49.45
BRYNNOR	4.4					68.30
TEXADA	2.6	0.47	9.43	1.0		
C. COPPER	3.0	1.46	4.41	1.55		
PILGRIM	0.46		33.02			
YREKA	0.145	0.34	31.21	2.7		
ZEBALLOS	0.718	13.35	5.81			
D. MORTON	0.01	15.36	35.55	0.01		
WESTERN	22.0	1.96	93.84	1.27	6.69	
CAT FACE	405.0			0.47		
MT SICKER	0.277	4.22	90.01	3.4		
JORDAN RVR	1.3	0.676	1.7	1.03		

The second programme commenced in late November of 1988, on the completion of the Company's public financing, and has included regional mapping with road cut sampling, computer modelling of the 1963 airborne geophysical data, and a 762 metre (2,500 feet) drill programme. In addition archived soil sample rejects were recovered from storage and analyzed for gold arsenic, selenium, tellurium, bismuth, and antimony mineralization. These samples had previously been analyzed for copper, lead and zinc.

REGIONAL GEOLOGY

Vancouver Island, north of Holberg and Rupert Inlets, is underlain by rocks of the Vancouver Group. These rocks range in age from Upper Triassic to Lower Jurassic. They are intruded by rocks of Jurassic and Tertiary age and disconformably overlain by Cretaceous sedimentary rocks. The structural setting of Vancouver Island is shown in Figure 3. Figure 4 shows the 1:50,000 geological mapping of the northern part of the Island.

Faulting is prevalent in the area. Large-scale block faults with hundreds to thousands of metres of displacement are offset by younger strike-slip faults with displacements up to 750 metres (2,500 feet).

The Vancouver Group is described as follows:[6]

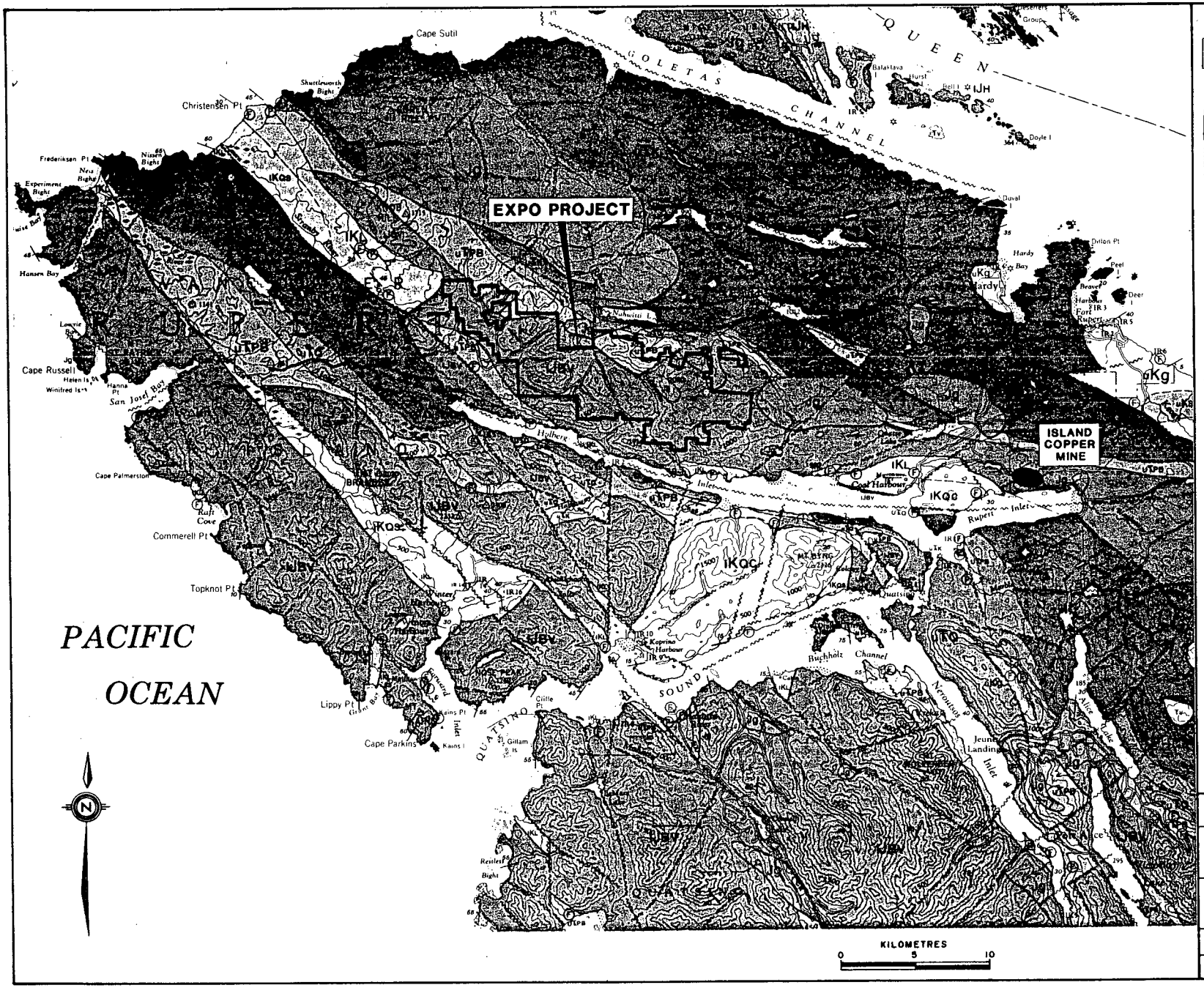
(a) Basal Sediment - Sill Unit: Middle and Upper Triassic Age

The basal sediment-sill unit consists of laminated to graded-bedded black shales and siltstones, silicified and invaded by diabase sills. The entire unit is estimated as 750-900 metres (2,500-3,000 feet) with the sedimentary portion being about 180 metres (600 feet) thick.

(b) Karmutsen Formation: Upper Triassic Age

Karmutsen Formation consists of 3,000-6,000 metres (10-20,000 feet) of volcanic flows, pyroclastics and minor sediments. It includes three distinct units: a lower pillow lava unit, a middle pillow breccia unit, and an upper lava flow unit. The latter consists of predominantly porphyritic and amygdaloidal basalt flows, individual flows of which range from 1-30 metres (to 100 feet) thick.

Two thin bands of limestone occur near the top of the Karmutsen Formation. The distribution of limestone outcrops is erratic and suggests a series of lenses at the same general stratigraphic horizon rather than one continuous bed.


EXPO PROJECT
ISLAND COPPER MINE
PACIFIC OCEAN
QUEEN CHARLOTTE STRAIT
GOLETAS CHANNEL
QUATSINO SOUND
Cape Sutil
Christensen Pt
Cape Russell
Cape Palmerston
Commerell Pt
Topknot Pt
Lippy Pt
Cape Parkins
Hansen Bay
San Josef Bay
Holberg Inlet
Rupert Inlet
Coal Harbour
Quatsino
Buchholz Channel
Jeune Landing
Hardy Bay
Port Hardy
Port Rupert
Beaver Harbour
Duval I
Doyle I
Balaklava
Hurst I
Bell I
Peel I
Deer I
Dillon Pt
Frederiksen Pt
Experiment Bight
Shushartowski Bight
Nissen Bight
Resilient Bight
Winifred Isls
Helen Is
Hanna Pt
Ruth Cove
Gillam Pt
Gillam Is
Kains I
Kains Pt
Gilttle Pt
Nesbitt L
Nimpkish Lake
Woss Lake
Nahwitti L
Nahwitti Bar
Kaprino Harbour
Winter Harbour
Quatsino
Mt Bain
Mt Hunter
Mt Herbert
Mt Ratford
Mt Hall
Mt Lewis
Mt Hyde
Mt Hoy
Mt Cox
Mt Cain
Mt Mahatta
Mt Bonanza
Mt Bowen
Mt Bowman
Mt Bowser
Mt Bowyer
Mt Bowie
Mt Bowlby
Mt Bowles
Mt Bowell
Mt Bowden
Mt Bowdoin
Mt Bowditch
Mt Bowditch
Mt Bowditch

The lower contact of the formation has not been observed on the northern part of Vancouver Island. The upper contact with limestone of the Quatsino Formation generally is sharp and easily recognized, although limestones and basalt locally are interbedded over a narrow stratigraphic interval at this contact.

Low-grade metamorphism of the Karmutsen Formation rocks has resulted in pervasive chloritization and amygdules filled with epidote, carbonate, zeolite, prehnite, chlorite, and quartz.

Basaltic rocks along contacts with intrusive stocks are in many places converted to dark-coloured hornblende hornfels. Skarn zones occur sporadically along these contacts, both in the inter-lava limestones and in the basalts.

(c) Quatsino Formation: Upper Triassic Age

The Quatsino Formation ranges from 60-1,000 metres (200-3,500 feet) in thickness and consists almost entirely of limestone with a few thin andesite or basalt flows. It has conformable contacts with both the overlying Parson's Bay sediments and the underlying Karmutsen volcanics. The upper contact with the Parson's Bay Formation is gradational with limestone grading upward into carbonaceous argillites.

Within the contact metamorphic/metasomatic aureoles adjacent to intrusive stocks, skarn development and silicification of limestone, accompanied by chalcopyrite-magnetite or galena, sphalerite and silver mineralization has been noted.

(d) Parson's Bay Formation: Upper Triassic Age

The Parson's Bay Formation consists of between 60-360 metres (200-1,200 feet) of argillite, minor limestone, agglomeratic and tuffaceous limestone, tuff, quartzite and minor conglomerate. At both its base and top, the unit exhibits gradational contacts with the Quatsino and Harbledown Formations.

On a regional scale, the rocks are unmetamorphosed. Locally, adjacent to intrusive contacts, pyrite-magnetite replacement bands up to one-half inch thick in banded tuffs have been observed.

(e) Harbledown Formation: Lower Jurassic Age

The Harbledown Formation consists of 485 metres (1,600 feet), a non-volcanic argillite-greywacke sequence separating the Parson's Bay from the Bonanza Formation.

(f) Bonanza Formation: Lower Jurassic Age

The Bonanza Formation is approximately 1,500 metres (8,500 feet) thick. The lower portion consists of bedded and massive tuffs, formational breccias and rare amygdaloidal and porphyritic flows, in the compositional range andesite to basalt. Porphyritic dykes and sills intrude the lower part of the unit. In the upper part of the Bonanza, rhyodacite flows and breccias become more numerous and are interbedded with andesite and basalt flows, tuffs and tuff breccias.

Regional metamorphism within the Bonanza Volcanics is very low grade, possibly zeolite facies. Plagioclase commonly is albitized and saussuritized. Chlorite, epidote and laumontite occur within the matrix of volcanic breccias, in veinlets, and in amygdules. Coarse intraformational breccias locally are hematized.

Biotite and amphibolite hornfelses occur adjacent to stocks which intrude the Bonanza Volcanics.

"Pyrobitumen", a black hydrocarbon erratically distributed within the Bonanza rocks, generally occurs as fracture fillings or in the centre of zeolite-carbonate veins. Its distribution is not related to the position of the intrusive stocks.

Cretaceous Sediments

The Vancouver Group is unconformably overlain by non-marine Cretaceous sediments of the Longarm Formation which are estimated to be about 300 metres (1,000 feet) thick in the Port Hardy area. These sediments, consisting of conglomerate, sandstone, greywacke, and siltstone and some carbonaceous and impure coal seams, occupy local basins. Early coal mining in the district was from several of these basins.

Intrusive Rocks

The Vancouver Group rocks are intruded by a number of Jurassic-aged stocks and batholiths. In the Holberg Inlet area a belt of northwest-trending stocks extend from the east end of Rupert Inlet to the mouth of Stranby River on the north coast of Vancouver Island[15].

Quartz-feldspar porphyry dikes and irregular bodies occur along the south edge of the belt of stocks. Dykes are characterized by coarse, subhedral quartz and plagioclase phenocrysts set in a pink, very fine grained, quartz and feldspar matrix. They are commonly extensively altered and pyritized. At Island Copper Mine, these porphyries are enveloped by altered, brecciated,

mineralized Bonanza wallrocks. The porphyries, too, are cut by siliceous veins, pyritized, extensively altered, and are mineralized where they have been brecciated. The quartz-feldspar porphyries are thought to be differentiates of middle Jurassic, felsic, intrusive rocks.

Other intrusive rocks of lesser significance include felsic dykes and sills around the margins of some intrusive stocks; dykes of andesitic composition, which cut the Karmutsen, Quatsino and Parson's Bay Formation, and represent feeders for Bonanza volcanism; and Tertiary basalt-dacite dykes intruding Cretaceous sediments.

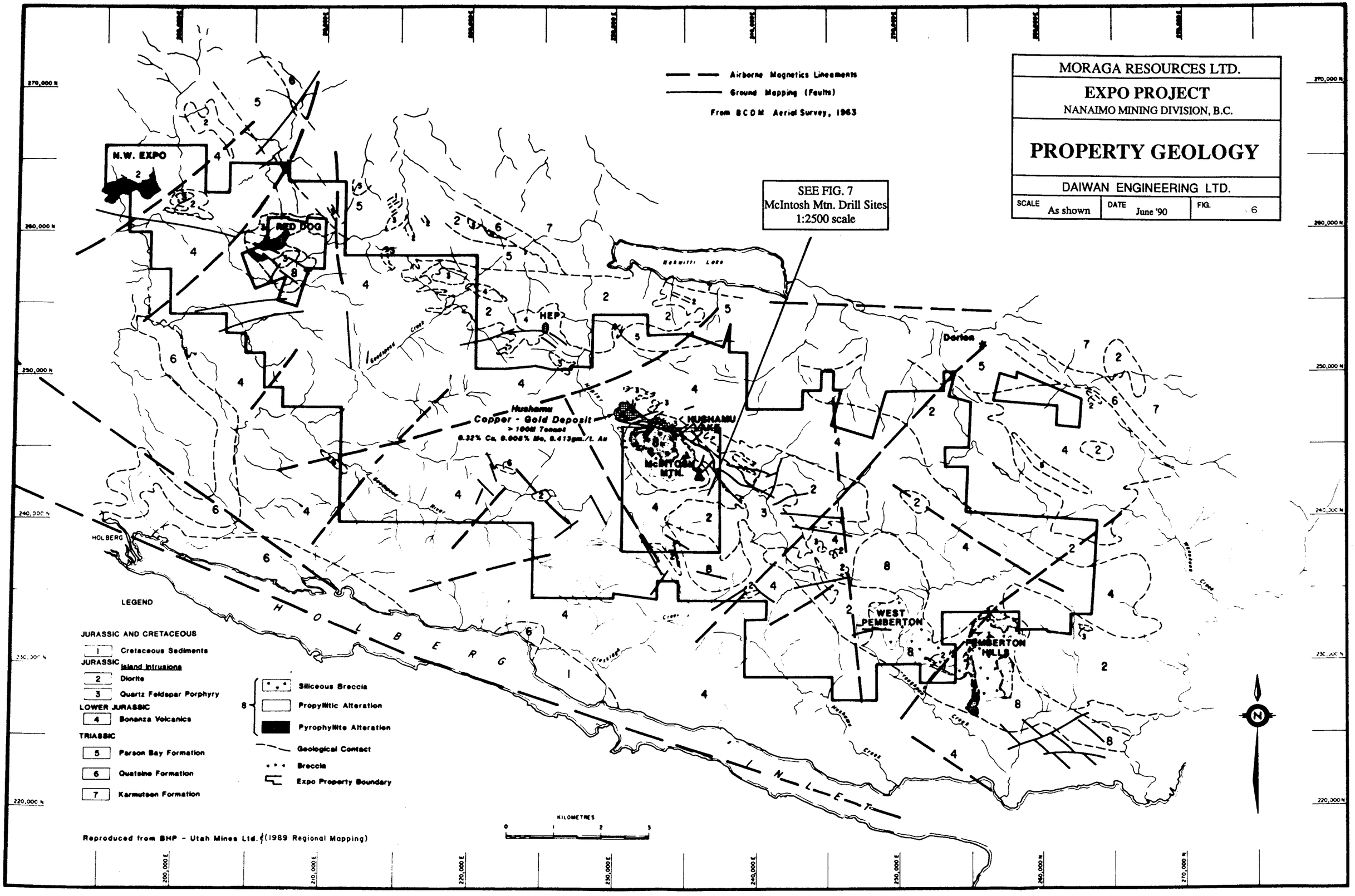
Structure

The structure of the rocks north of Holberg and Rupert Inlets is that of shallow synclinal folding along a northwesterly fold axis. The steeper southwesterly limbs of the folds have apparently been truncated by faults roughly parallel to the fold axis. Failure of limestone during folding may have influenced the location of some of the faulting as indicated by their proximity of the Dawson and Stranby River Faults to the Quatsino horizon. Transverse faulting is pronounced and manifested by numerous north and northeasterly trending faults and topographic lineaments (Figure 3).

The northern part of Vancouver Island lies in a block faulted structural setting with post Lower Cretaceous northwesterly trending faults apparently being the major system (Figure 4). This system causes both repetition and loss of parts of the stratigraphic section, with aggregate movement in a vertical sense in the order of tens to hundreds of metres. The most significant of these fault systems trends west to northwest following Rupert and Holberg Inlets. Near the west end of the Holberg Inlet it splits with the main branch following the Holberg Inlet, the other branch passing through the west side of the Stranby Valley. Another northwesterly to westerly system passes through William Lake and still another smaller system passes through Nahwitti Lake.[6]

Northeasterly trending faults comprise a subordinate fault system. In some cases, apparent lateral displacement, in the order of a several hundred metres, can be measured on certain horizons. Movement, however, could be entirely vertical with the apparent offset resulting from the regional dip of the beds.

Recent computer modelling of the airborne magnetometer data has provided a very clear understanding of the relationship of secondary conjugate sets of northeast and north westerly faults related to the major west-northwest trending breaks.[7] These conjugate fault sets appear to relate directly to the significant mineralization at the Island Copper, Hushamu, Hep and Red Dog copper/gold deposits. Using these relationships further similar zones are evident on the Expo claim block.


MORAGA RESOURCES LTD.
EXPO PROJECT
NANAIMO MINING DIVISION, B.C.
PROPERTY GEOLOGY
DAIWAN ENGINEERING LTD.
SCALE As shown
DATE June '90
FIG. 6
Airborne Magnetics Lineaments
Ground Mapping (Faults)
From BCDM Aerial Survey, 1963
SEE FIG. 7
McIntosh Mtn. Drill Sites
1:2500 scale
N.W. EXPO
RED DOG
HEP
Dorion
Hushamu
Copper - Gold Deposit
> 100M Tonnes
0.32% Cu, 0.008% Mo, 0.413gm./t. Au
HUSHAMU LAKE
McINTOSH MTN.
WEST PEMBERTON
PEMBERTON HILLS
HOLBERG
HOLBERG INLET
LEGEND
JURASSIC AND CRETACEOUS
1 Cretaceous Sediments
JURASSIC Island Intrusions
2 Diorite
3 Quartz Feldspar Porphyry
LOWER JURASSIC
4 Bonanza Volcanics
TRIASSIC
5 Parson Bay Formation
6 Quatsino Formation
7 Karmutsen Formation
8 Siliceous Breccia
Propyllitic Alteration
Pyrophyllite Alteration
Geological Contact
Breccia
Expo Property Boundary
KILOMETRES
0 1 2 3
Reproduced from BHP - Utah Mines Ltd. (1989 Regional Mapping)
270,000 N
260,000 N
250,000 N
240,000 N
230,000 N
220,000 N
200,000 E
210,000 E
220,000 E
230,000 E
240,000 E
250,000 E
260,000 N
270,000 N

Generally, regional dip of the bedding is gentle to moderate southwesterly. Locally, in the area west of Holberg, dips are much steeper, but these are in close proximity to major faults. There is little folding or flexuring of bedding visible, except along loci of major faults where it is particularly conspicuous in thinly bedded sediments of Lower Bonanza. Bedding is generally inconspicuous in massive beds of Karmutsen, Quatsino and Bonanza rocks, particularly inland where outcrops are widely scattered.

REGIONAL MINERALIZATION

A number of types of mineral occurrences are known on Northern Vancouver Island. These include:

1. Skarn deposits: copper-iron and lead-zinc skarns

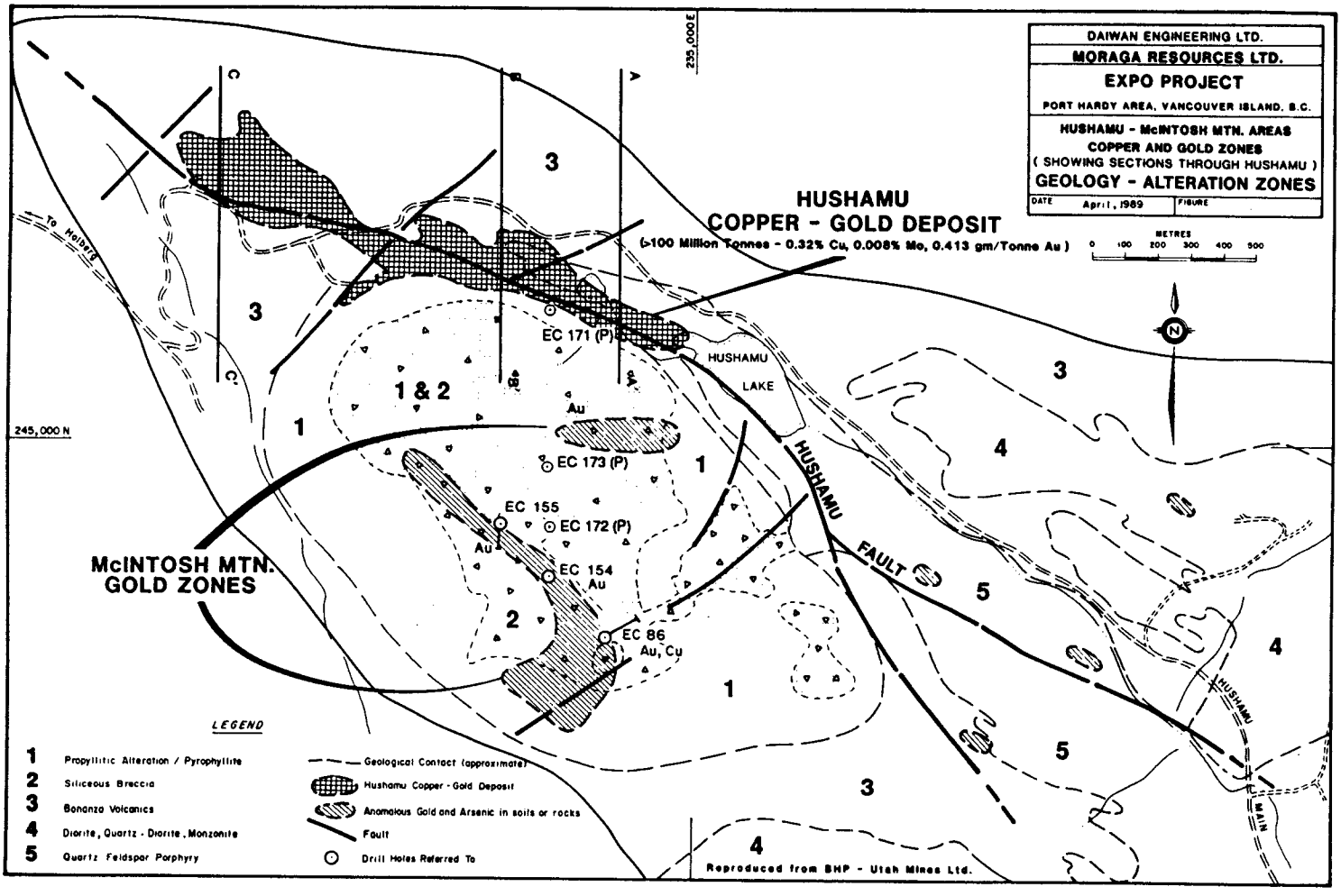
2. Copper in basic volcanic rocks (Karmutsen): in amygdules, fractures, small shears and quartz-carbonate veins, with no apparent relationship to intrusive activity

3. Veins: with gold and/or base metal sulphides, related to intrusive rocks

4. Porphyry copper deposits: largely in the country rock surrounding or enveloping granitic rocks and their porphyritic phases.

Figure 3 indicates the large size of the Island Copper - Expo projects and the relationship of mineral deposits in the West Coast Mineral Belt to the major regional structures. Figure 5 shows the location and diversity of the mineral deposits recognized in the North Vancouver Island area[6], and highlights the extensive central location of the Expo claim holding.

Utah Mines Ltd., in their many years of exploration in the Holberg-Rupert Inlets area, focused their attention on the search for copper porphyry deposits. Their exploration resulted in locating and developing the Island Copper Mine. In addition, they located other areas of porphyry mineralization, as well as two areas anomalous in gold and one area with massive sulphide mineralization within the Expo group claim area. Moraga's efforts in the past 6 months have been directed at verifying the extent of the gold mineralization within the copper deposits; detailing and testing the presently identified adjacent epithermal gold mineralization; and relating the sedimentary sulphide horizons to similar style mineralization presently mined by Western Mines at Buttle Lake to the south.


DAIWAN ENGINEERING LTD.
MORAGA RESOURCES LTD.
EXPO PROJECT
PORT HARDY AREA, VANCOUVER ISLAND, B.C.
HUSHAMU - McINTOSH MTN. AREAS
COPPER AND GOLD ZONES
(SHOWING SECTIONS THROUGH HUSHAMU)
GEOLOGY - ALTERATION ZONES
DATE April, 1989
FIGURE
HUSHAMU
COPPER - GOLD DEPOSIT
(>100 Million Tonnes - 0.32% Cu, 0.008% Mo, 0.413 gm/Tonne Au)
METRES
0 100 200 300 400 500
To Holberg
235,000 E
245,000 N
EC 171 (P)
HUSHAMU LAKE
EC 173 (P)
EC 155
EC 172 (P)
EC 154
Au
EC 86
Au, Cu
McINTOSH MTN.
GOLD ZONES
HUSHAMU FAULT
HUSHAMU
MAIN
LEGEND
1 Propylitic Alteration / Pyrophyllite
2 Siliceous Breccia
3 Bonanza Volcanics
4 Diorite, Quartz - Diorite, Monzonite
5 Quartz Feldspar Porphyry
Geological Contact (approximate)
Hushamu Copper - Gold Deposit
Anomalous Gold and Arsenic in soils or rocks
Fault
Drill Holes Referred To
Reproduced from BHP - Utah Mines Ltd.

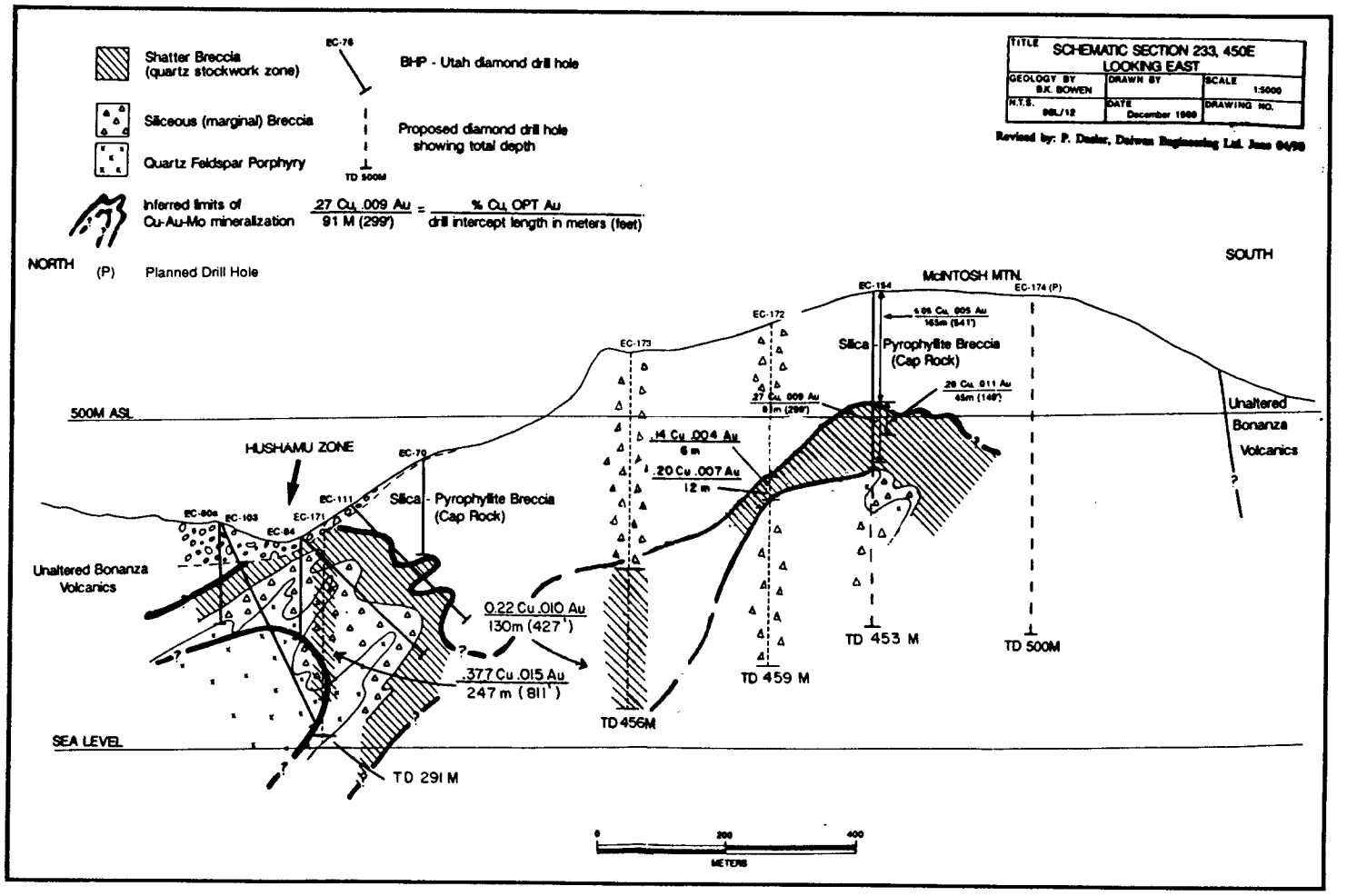
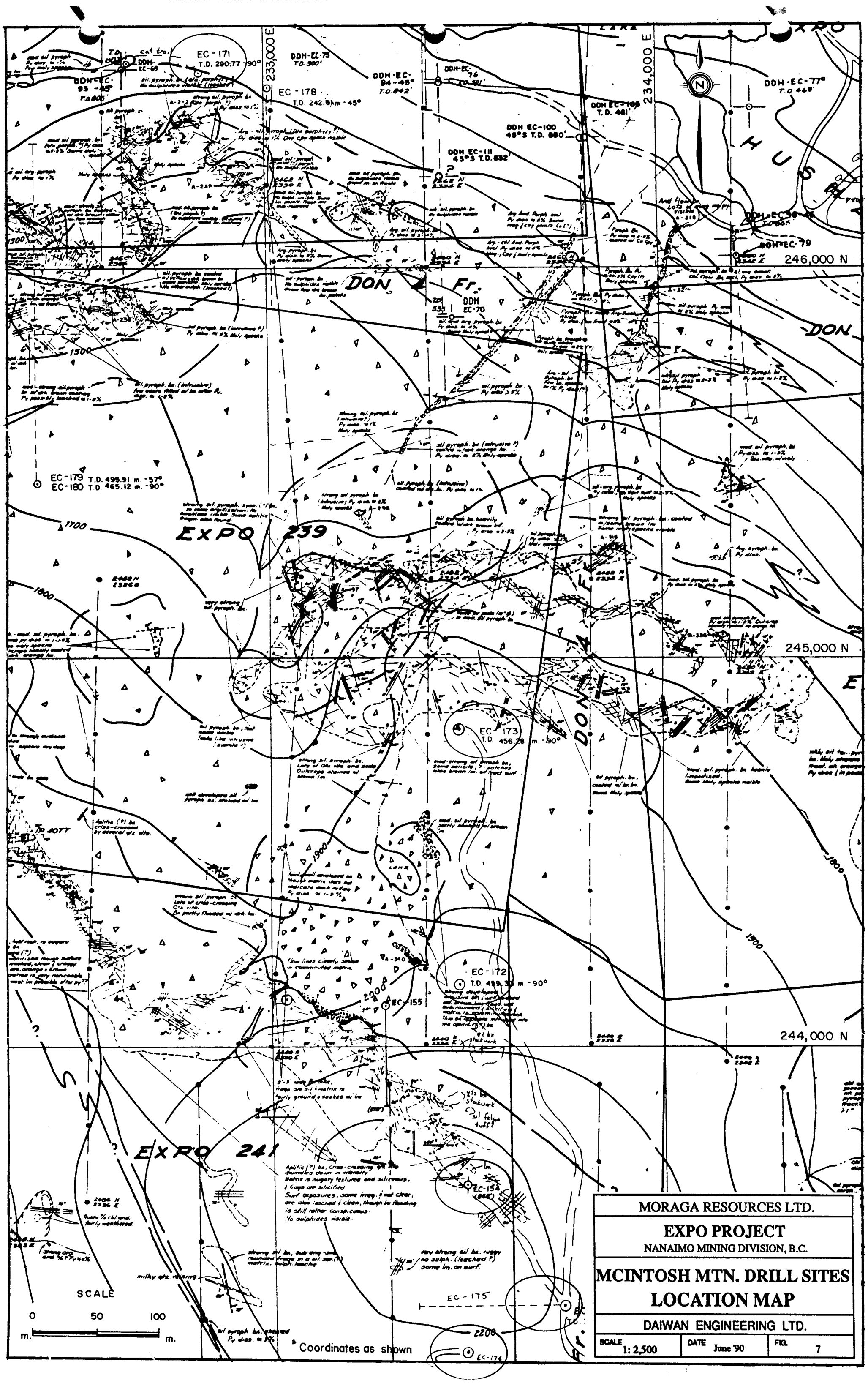

Shatter Breccia (quartz stockwork zone)
Siliceous (marginal) Breccia
Quartz Feldspar Porphyry
Inferred limits of Cu-Au-Mo mineralization
EC-76
BHP - Utah diamond drill hole
Proposed diamond drill hole showing total depth
TD 500M
.27 Cu .009 Au / 91 M (299') = % Cu OPT Au / drill intercept length in meters (feet)
TITLE SCHEMATIC SECTION 233, 450E LOOKING EAST
GEOLOGY BY B.K. BOWEN
DRAWN BY
SCALE 1:5000
N.T.S. 92L/12
DATE December 1989
DRAWING NO.
Revised by: P. Dasler, Daiwan Engineering Ltd. June 04/90
NORTH
SOUTH
(P) Planned Drill Hole
McINTOSH MTN.
EC-154
EC-174 (P)
EC-172
EC-173
Silica - Pyrophyllite Breccia (Cap Rock)
.27 Cu .009 Au 91m (299')
.20 Cu .011 Au 45m (148')
Unaltered Bonanza Volcanics
500M ASL
HUSHAMU ZONE
EC-70
EC-111
EC-90s
EC-103
EC-171
EC-84
Silica - Pyrophyllite Breccia (Cap Rock)
.14 Cu .004 Au 6m
.20 Cu .007 Au 12m
Unaltered Bonanza Volcanics
0.22 Cu .010 Au 130m (427')
.377 Cu .015 Au 247 m (811')
TD 459 M
TD 453 M
TD 500M
TD456M
SEA LEVEL
TD 291 M
0 200 400
METERS

FIG. 6a



MORAGA RESOURCES LTD.

EXPO PROJECT

NANAIMO MINING DIVISION, B.C.

MCINTOSH MTN. DRILL SITES LOCATION MAP

DAIWAN ENGINEERING LTD.

SCALE	DATE	FIG.
1: 2,500	June '90	7

PROPERTY GEOLOGY

Vancouver Island, north of Holberg and Rupert Inlets, is underlain by rocks of the Vancouver Group consisting of (with decreasing age) Karmutsen Formation, Quatsino Formation, Parson Bay Formation, Harbledown Formation and Bonanza Formation.

In the drilled area the rocks consist predominately of the Bonanza Formation which is generally characterized by andesitic to basaltic bedded and massive tuffs, formational breccias and rare amygdaloidal and porphyritic flows. In the upper Bonanza the flows and breccias become rhyodacitic and are interbedded with andesite and basalt flows, tuffs and tuff breccias.

The volcanics are intruded by quartz-feldspar porphyry. These Island Intrusions give rise to localized propyllitic and pyrophyllitic alteration as shown in figure 6a.

DRILL PROGRAM SUMMARY

The drill program, using NQ wireline, was carried out from April 18 to May 27, 1988 and consisted of 1823.6m (5981 ft) of drilling in six holes. The drilling information is summarized in Table 1. The core is stored at the BHP-Utah Mines Island Copper site at Coal Harbour.

Table 1 Drill Summary

Hole #	Dip	Azimuth	Depth	Reason for Drilling	Location
EC-154	-90°	---	188.4m/618ft	Extending the depth of the hole.	233475E/243649N
EC-171	-90°	---	290.8m/954ft	To test southern extension of Hushamu reserve. Fill in between EC-69 and EC-75.	232820E/246518N
EC-172	-90°	---	459.3m/1507ft	To test depth of silica cap and mineralization at depth.	233475E/244164N
EC-173	-90°	---	456.3m/1497ft	To test depth of silica cap and mineralization at depth.	233475E/244859N

EC-174	-90°	---	90.5m/297ft	To test mineralization south of EC-154. Hole abandoned.	233492E/243215N
EC-175	-70°	270	338.3m/1110ft	To test zone midway between EC-154 and EC-174.	233733E/243328N
			1823.6m/5981ft		

The drill data will be subject to further detailed petrological and mineralogical studies. The following graphs show the distribution of mineralization within each hole.

CONCLUSIONS

The drilling has substantially increased the reserve potential of the Hushamu copper/gold zone.

Both gold and copper mineralization appear to be directly related (eg. high Cu = high Au). Values are carried by pyrite and pyrite/chalcopyrite mineralization associated with quartz and quartz/carbonate veining as well as general disseminations in various rock types. Elevated Au and Cu values also appear to be related to rocks exhibiting moderate to strong silicification. Within the Bonanza volcanics drilled there does not appear to be a specific lithologic host for either gold or copper mineralization. Therefore mineralization is likely epigenetic with areas of brecciation, silicification and subsequent quartz veining being prime targets.

RECOMMENDATIONS

Further drill exploration should be conducted on McIntosh Mt. west of drill hole EC-173. In this area molybdenum mineralization indicates leakage from a deep seated source.

CERIFICATE OF EXPENDITURES - McIntosh Mt. Drilling

1.0 Personnel	
1 Project Manager, 31.2 days @ $380/day	$11,856.00
1 Project Geologist, 67 days @ $340/day	22,780.00
1 Field Geologist, 50.85 days @ $260/day	13,221.00
1 Field Geologist, 14.25 days @ $200/day	2,850.00
1 Draftsperson, 6.8 days @ $225/day	1,496.00
2 Field Technicians, 13 days @ $225/day	2,925.00
2 Field Technicians, 39 days @ $170/day	6,630.00
2.0 Food & Accomodation	
140 Man days @ $43.41/day	6,077.32
3.0 Transportation	
2 4X4 Rental 70 days @ $72.39/day (incl. gas)	11,582.13
1 4X4 Rental 20 days @ $72.39/day (incl. gas)	
Airline transportation 1,509.92	
4.0 Field Supplies	
(Fire Hose, Flagging, Topo., Etc.)	11,164.57
5.0 Equipment Rental	
(Water Pump, Pack, Field Supplies)	2,809.40
6.0 Assays	
621 Drill Cores @ $23.41 each	14,540.41
23 Rocks @ $14.85 each	341.55
136 Soils @ $10.09 each	1,371.84
	16,253.80
7.0 Office Costs	
(Printing, Typing, Telephone, Etc.)	1,049.79
8.0 Contractors	
Bulldozer (Road & Site Prep.)	50,727.88
Drilling Costs, 5981' @ $24.07/ft	143,946.17
	$308,878.98

CLAIM GROUPS-DISTRIBUTION OF COSTS

Group	Work on claim	Feet of Drilling	% of Total Drilling
Mac 1 -	Expo 239	1497 Feet	25 %
Mac 2 -	Expo 237	954 Feet	16 %
Mac 3 -	Don 6	1110 Feet	19 %
Mac 4 -	Expo 241	2422 Feet	40 %
		5981 Feet	100 %

Total Expenditures - $308,878.98

Proportion of Expenditure Alloted to each Group

Mac 1 - $ 77,219.75

Mac 2 - 49,420.64

Mac 3 - 56,687.00

Mac 4 - 123,551.59

Total - $308,878.98

CERTIFICATE OF QUALIFICATIONS

I, Gary Sutton, do hereby certify that:

1. I am a geologist for Daiwan Engineering Ltd. with offices at 1030-609 Granville Street, Vancouver, British Columbia.

2. I am a graduate of the University of British Columbia in Vancouver, British Columbia with a degree of B.Sc., Geology.

3. I have practised my profession as an exploration Geologist since 1986.

4. This report is based on fieldwork and supervision of work programmes on the property since 1986 by Daiwan Engineering.

5. I have no interest in the property of shares of Moraga Resources Ltd. or in any of the companies with contiguous property to their claim blocks, nor do I expect to receive any.

6. This report has been prepared for BCDM assessment purposes only.

Gary Sutton, B.Sc.
June 15, 1990

CERTIFICATE OF QUALIFICATIONS

I, Peter G. Dasler, do hereby certify that:

1. I am a geologist for Daiwan Engineering Ltd. with offices at 1030-609 Granville Street, Vancouver, British Columbia.

2. I am a graduate of the University of Canterbury, Christchurch, New Zealand with a degree of M.Sc., Geology.

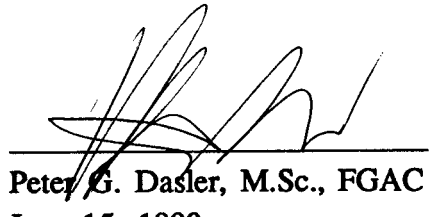
3. I am a Fellow of the Geological Association Of Canada, a Member, in good standing, of the Australasian Institute of Mining and Metallurgy, and a Member of the Geological Society of New Zealand.

4. I have practised my profession continuously since 1975, and have held senior geological positions and managerial positions, including Mine Manager, with mining companies in Canada and New Zealand.

5. This report is based on a personal fieldwork and supervision of the work programmes on the property since 1986, and from reports of Professional Engineers and others working in the area.

6. I have a part interest in 15000 shares of Moraga Resources Ltd.

7. This report has been prepared for BCDM assessment purposes only.



Peter G. Dasler, M.Sc., FGAC
June 15, 1990

REFERENCES

1. Jones H.M. 1988 — A report on the Expo property Holberg Inlet for Moraga Resources Ltd. Filed V.S.E. Qualifying Report.

2. _____ (1963) — G.S.C. Geophysics Paper 1734 incl. maps 1734G, 1738G.

3. Gableman, J.W. (1982) — Geological Occurrence of Gold at Island Copper Internal Report for Utah Mines, Dec. 1982.

4. Pickering, Schmidt — Ore Reserve Hushamu. Internal report for Island Copper Mines (1983)Ltd.

5. Northcote, K.E. — (1970) - Rupert Inlet - Cape Scott Map - Area in B.C. Dept. of Mines Petrol. Res. G.E.M. 1970, pp. 250-278.

   (1972) - Island Copper, In B.C. Dept. Mines Petrol. Res. G.E.M. 1972, pp. 293-298.

6. Muller, J.E., Northcote, K.E. and Carlisle, D. (1974) — Geology and Mineral Deposits of Alert Bay - Cape Scott Map - Area, British Columbia, Geol. Surv. Canada Paper 74-8.

7. Utah Mines Ltd. — Private company files. Reports by E.S. Rugg, B. Bowen, and B. Richards.

8. Kesler, S.E. (1985) — Report on Geological Review of the McIntosh - Pemberton Precious metal Exploration Area. Private Report to BHP-Utah Mines Ltd., June 1985.

9. Magnum, M. (1988) — V.S.E. Listing Report Silver Drake Resources Ltd. - July 12, 1988.

10. _____ 1988 — V.S.E. News Release 4 Jan 1989 - Crew Natural Resources Ltd. George Cross News Letter - November 23, 1988.

11. Adamson R. (1989) — Correspondence to Daiwan Engineering Ltd, and personal discussions April 1989.

12. Sillitoe, R.H. (1980) Styles of low-grade gold mineralization in Volcano-plutonic areas.

13. McMillan et al (1986) Mineral Deposits in British Columbia - A review of their Tectonic settings. Paper in Geoexpo conference Vancouver, B.C. 1986.

14. BCDM Records Island Copper Statistics, B.C. Dept. of Mines records to 1984 with estimates to end of 1986.

15. Carson DJT 1972 The plutonic rocks of Vancouver Island - Page 72-44.

16. Woods, D.V. (1987) Geophysical Report on Reconnaissance Surface and Bore Hole Pulse Electro, magnetic Survey on the Expo Project, Vancouver Island, report for Moraga Resources Ltd.

17. Dasler, P. G. (1989) Report on the Expo Group Northern Vancouver Island for Moraga Resources Ltd.

APPENDIX 1

CLAIM DATA

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 1	Expo 419	1	601448	17/10/96
MAC 1	Expo 420	1	601447	17/10/96
MAC 1	Expo 440	1	601449	17/10/96
MAC 1	Expo 442	1	21184	14/11/96
MAC 1	Expo 896	1	21305	14/11/96
MAC 1	Expo 355	1	20578	19/10/96
MAC 1	Expo 356	1	20579	19/10/96
MAC 1	Expo 375	1	20588	19/10/96
MAC 1	Expo 376	1	20589	19/10/96
MAC 1	Expo 377	1	21149	14/11/96
MAC 1	Expo 397	1	21159	14/11/96
MAC 1	Expo 398	1	21160	14/11/96
MAC 1	Expo 443	1	21185	14/11/96
MAC 1	Expo 444	1	21186	14/11/96
MAC 1	Expo 445	1	21187	14/11/96
MAC 1	Expo 446	1	21188	14/11/96
MAC 1	Expo 463	1	21195	14/11/96
MAC 1	Expo 464	1	21196	14/11/96
MAC 1	Expo 465	1	21197	14/11/96
MAC 1	Expo 466	1	21198	14/11/96
MAC 1	Expo 882	1	21295	14/11/96
MAC 1	Expo 883	1	21296	14/11/96
MAC 1	Expo 884	1	21297	14/11/96
MAC 1	Expo 885	1	21298	14/11/96
MAC 1	Expo 263	1	20517	19/10/96
MAC 1	Expo 264	1	20518	19/10/96
MAC 1	Expo 265	1	20519	19/10/96
MAC 1	Expo 266	1	20520	19/10/96
MAC 1	Expo 281	1	20535	19/10/96
MAC 1	Expo 282	1	20536	19/10/96
MAC 1	Expo 283	1	20537	19/10/96
MAC 1	Expo 284	1	20538	19/10/96
MAC 1	Expo 285	1	20539	19/10/96
MAC 1	Expo 286	1	20540	19/10/96
MAC 1	Expo 287	1	20541	19/10/96
MAC 1	Expo 288	1	20542	19/10/96
MAC 1	Expo 289	1	20543	19/10/96
MAC 1	Expo 290	1	20544	19/10/96
MAC 1	Expo 291	1	20545	19/10/96
MAC 1	Expo 293	1	20547	19/10/96
MAC 1	Expo 294	1	20548	19/10/96
MAC 1	Expo 305	1	20558	19/10/96
MAC 1	Expo 306	1	20559	19/10/96
MAC 1	Expo 335	1	20568	19/10/96
MAC 1	Expo 336	1	20569	19/10/96
MAC 1	Expo 312	1	21118	13/11/96
MAC 1	Expo 417	1	21169	14/11/96
MAC 1	Expo 418	1	21170	14/11/96
MAC 1	Expo 421	1	21173	14/11/96
MAC 1	Expo 422	1	21174	14/11/96
MAC 1	Expo 437	1	21179	14/11/96
MAC 1	Expo 438	1	21180	14/11/96

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 1	Expo 439	1	21181	14/11/96
MAC 1	Expo 441	1	21183	14/11/96
MAC 1	Expo 457	1	21189	14/11/96
MAC 1	Expo 458	1	21190	14/11/96
MAC 1	Expo 459	1	21191	14/11/96
MAC 1	Expo 460	1	21192	14/11/96
MAC 1	Expo 461	1	21193	14/11/96
MAC 1	Expo 462	1	21194	14/11/96
MAC 1	Expo 891	1	21304	14/11/96
MAC 1	Don 11 Fr	1	30283	21/11/96
MAC 1	Don 12 Fr	1	30284	21/11/96
MAC 1	Pemberton 3	15	1110	01/04/96
MAC 1	Expo 1013 Fr	1	1557	22/08/96
MAC 1	Pemberton 5 Fr	1	1112	01/04/96
MAC 1	Pemberton 6 Fr	1	1142	14/04/96
MAC 1	Don 6 Fr	1	29505	18/08/96
MAC 1	Expo 261	1	20515	19/10/96
MAC 1	Expo 262	1	20516	19/10/96
MAC 1	Expo 399	1	21161	14/11/96
MAC 1	Expo 400	1	21162	14/11/96
MAC 1	Expo 503 Fr	1	20612	17/10/98

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 2	Don 5 Fr	1	29504	18/08/97
MAC 2	Don 15 Fr	1	30287	21/11/97
MAC 2	Don 16 Fr	1	30288	21/11/97
MAC 2	Expo 101	1	20473	19/10/97
MAC 2	Expo 107	1	20479	19/10/98
MAC 2	Expo 108	1	20480	19/10/97
MAC 2	Expo 110	1	20233	10/10/97
MAC 2	Expo 112	1	20235	10/10/98
MAC 2	Expo 114	1	20237	10/10/98
MAC 2	Expo 115	1	20238	10/10/98
MAC 2	Expo 116	1	20239	10/10/97
MAC 2	Expo 117	1	20240	10/10/98
MAC 2	Expo 119	1	3547	08/07/97
MAC 2	Expo 131	1	3546	08/07/97
MAC 2	Expo 132	1	3545	08/07/97
MAC 2	Expo 177	1	20288	10/10/00
MAC 2	Expo 190	1	20301	10/10/97
MAC 2	Expo 198	1	20309	10/10/98
MAC 2	Expo 199	1	20310	10/10/97
MAC 2	Expo 200	1	20311	10/10/97
MAC 2	Expo 217	1	20328	10/10/98
MAC 2	Expo 219	1	20330	10/10/97
MAC 2	Expo 220	1	20331	10/10/97
MAC 2	Expo 222	1	20333	10/10/97
MAC 2	Expo 237	1	20491	19/10/98
MAC 2	Expo 238	1	20492	19/10/98
MAC 2	Expo 240	1	20494	19/10/97
MAC 2	Expo 504 Fr	1	21612	18/12/97
MAC 2	Expo 862	1	21321	14/11/97
MAC 2	Expo 866	1	21325	14/11/97
MAC 2	Expo 868	1	21327	14/11/97
MAC 2	Expo 1008 Fr	1	27352	05/12/98
MAC 2	Expo 1011 Fr	1	27355	05/12/98
MAC 2	Expo 1012 Fr	1	27356	05/12/97
MAC 2	Hep 40	1	19018	20/09/97
MAC 2	Hep 41	1	19019	20/09/97
MAC 2	Hep 42	1	19020	20/09/97
MAC 2	Hep 43	1	19021	20/09/97
MAC 2	Hep 44	1	19022	20/09/97
MAC 2	Hep 46	1	19024	20/09/97
MAC 2	Hep 47	1	19025	20/09/97
MAC 2	Hep 48	1	19026	20/09/97
MAC 2	Hep 50	1	19028	20/09/98
MAC 2	Hep 52	1	3543	07/07/97
MAC 2	Hep 53	1	3544	07/07/97
MAC 2	Hep 57	1	19035	20/09/97
MAC 2	Hep 60	1	3267	28/02/97
MAC 2	Hep 61	1	3268	01/03/97
MAC 2	Hep 68	1	19046	20/09/98
MAC 2	Hep 69	1	3264	28/02/97
MAC 2	Hep 70	1	3265	01/03/97
MAC 2	Hep 71	1	3266	01/03/97

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 2	Hep 94	1	20224	04/10/98
MAC 2	Hep 96	1	20226	04/10/97
MAC 2	Hep 98	1	20228	04/10/97
MAC 2	Hep 99	1	20229	04/10/97
MAC 2	Hep 101	1	20231	04/10/97

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 3	Don 4 Fr	1	29503	18/08/97
MAC 3	Don 13 Fr	1	30285	21/11/97
MAC 3	Don 14 Fr	1	30286	21/11/97
MAC 3	Expo 192	1	20303	10/10/97
MAC 3	Expo 239	1	20493	19/10/97
MAC 3	Expo 257	1	20511	19/10/97
MAC 3	Expo 260	1	20514	19/10/97
MAC 3	Expo 277	1	20531	19/10/97
MAC 3	Expo 278	1	20532	19/10/97
MAC 3	Expo 279	1	20533	19/10/97
MAC 3	Expo 280	1	20534	19/10/97
MAC 3	Expo 297	1	20550	19/10/97
MAC 3	Expo 298	1	20551	19/10/97
MAC 3	Expo 299	1	20552	19/10/97
MAC 3	Expo 300	1	20553	19/10/97
MAC 3	Expo 301	1	20554	19/10/97
MAC 3	Expo 302	1	20555	19/10/97
MAC 3	Expo 303	1	20556	19/10/97
MAC 3	Expo 304	1	20557	19/10/97
MAC 3	Expo 323	1	21578	18/12/97
MAC 3	Expo 324	1	21579	18/12/97
MAC 3	Expo 325	1	21580	18/12/97
MAC 3	Expo 326	1	21581	18/12/97
MAC 3	Expo 327	1	20560	19/10/97
MAC 3	Expo 328	1	20561	19/10/97
MAC 3	Expo 329	1	20562	19/10/97
MAC 3	Expo 330	1	20563	19/10/97
MAC 3	Expo 331	1	20564	19/10/97
MAC 3	Expo 332	1	20565	19/10/97
MAC 3	Expo 333	1	20566	19/10/97
MAC 3	Expo 334	1	20567	19/10/97
MAC 3	Expo 347	1	20570	19/10/97
MAC 3	Expo 348	1	20571	19/10/97
MAC 3	Expo 349	1	20572	19/10/97
MAC 3	Expo 350	1	20573	19/10/97
MAC 3	Expo 351	1	20574	19/10/97
MAC 3	Expo 352	1	20575	19/10/97
MAC 3	Expo 353	1	20576	19/10/97
MAC 3	Expo 354	1	20577	19/10/97
MAC 3	Expo 367	1	20580	19/10/97
MAC 3	Expo 368	1	20581	19/10/97
MAC 3	Expo 369	1	20582	19/10/97
MAC 3	Expo 370	1	20583	19/10/97
MAC 3	Expo 371	1	20584	19/10/97
MAC 3	Expo 372	1	20585	19/10/97
MAC 3	Expo 373	1	20586	19/10/97
MAC 3	Expo 374	1	20587	19/10/97
MAC 3	Expo 387	1	20590	19/10/97
MAC 3	Expo 388	1	20591	19/10/97
MAC 3	Expo 389	1	20592	19/10/97
MAC 3	Expo 390	1	20593	19/10/97
MAC 3	Expo 392	1	20595	19/10/97

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 3	Expo 393	1	20596	19/10/97
MAC 3	Expo 394	1	20597	19/10/97
MAC 3	Expo 395	1	20598	19/10/97
MAC 3	Expo 396	1	20599	19/10/97
MAC 3	Expo 495	1	21606	18/12/97
MAC 3	Expo 496	1	21607	18/12/97
MAC 3	Expo 497	1	21608	18/12/97
MAC 3	Expo 498	1	21609	18/12/97
MAC 3	Expo 499	1	21610	18/12/97
MAC 3	Expo 500	1	21611	18/12/97
MAC 3	Expo 525	1	21617	18/12/97
MAC 3	Expo 526	1	21618	18/12/97
MAC 3	Expo 527	1	21619	18/12/97
MAC 3	Expo 528	1	21620	18/12/97
MAC 3	Expo 529	1	21621	18/12/97
MAC 3	Expo 530	1	21622	18/12/97
MAC 3	Expo 533	1	21625	18/12/97
MAC 3	Expo 534	1	21626	18/12/97
MAC 3	Expo 537	1	21629	18/12/97
MAC 3	Expo 538	1	21630	18/12/97
MAC 3	Expo 541	1	21633	18/12/97
MAC 3	Expo 542	1	21634	18/12/97

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 4	Clesk 1	20	3792	17/04/98
MAC 4	Clesk 2	20	3793	17/04/98
MAC 4	Clesk 3	1	3794	17/04/98
MAC 4	Clesk 4	1	3795	15/04/98
MAC 4	Don 9 Fr	1	30281	21/11/97
MAC 4	Don 10 Fr	1	30282	21/11/97
MAC 4	Expo 185	1	20296	10/10/97
MAC 4	Expo 187	1	20298	10/10/97
MAC 4	Expo 201	1	20312	10/10/97
MAC 4	Expo 202	1	20313	10/10/97
MAC 4	Expo 203	1	20314	10/10/97
MAC 4	Expo 204	1	20315	10/10/97
MAC 4	Expo 205	1	20316	10/10/97
MAC 4	Expo 206	1	20317	10/10/97
MAC 4	Expo 207	1	20318	10/10/97
MAC 4	Expo 208	1	20319	10/10/97
MAC 4	Expo 209	1	20320	10/10/97
MAC 4	Expo 210	1	20321	10/10/97
MAC 4	Expo 211	1	20322	10/10/97
MAC 4	Expo 212	1	20323	10/10/97
MAC 4	Expo 213	1	20324	10/10/97
MAC 4	Expo 214	1	20325	10/10/97
MAC 4	Expo 215	1	20326	10/10/97
MAC 4	Expo 216	1	20327	10/10/97
MAC 4	Expo 221	1	20332	10/10/97
MAC 4	Expo 223	1	20334	10/10/97
MAC 4	Expo 224	1	20335	10/10/97
MAC 4	Expo 225	1	20336	10/10/97
MAC 4	Expo 226	1	20337	10/10/97
MAC 4	Expo 227	1	20481	19/10/97
MAC 4	Expo 228	1	20482	19/10/97
MAC 4	Expo 229	1	20483	19/10/97
MAC 4	Expo 230	1	20484	19/10/97
MAC 4	Expo 231	1	20485	19/10/97
MAC 4	Expo 232	1	20486	19/10/97
MAC 4	Expo 233	1	20487	19/10/97
MAC 4	Expo 234	1	20488	19/10/97
MAC 4	Expo 235	1	20489	19/10/97
MAC 4	Expo 236	1	20490	19/10/97
MAC 4	Expo 241	1	20495	19/10/97
MAC 4	Expo 242	1	20496	19/10/97
MAC 4	Expo 246	1	20500	19/10/97
MAC 4	Expo 247	1	20501	19/10/97
MAC 4	Expo 248	1	20502	19/10/97
MAC 4	Expo 249	1	20503	19/10/97
MAC 4	Expo 250	1	20504	19/10/97
MAC 4	Expo 251	1	20505	19/10/97
MAC 4	Expo 252	1	20506	19/10/97
MAC 4	Expo 253	1	20507	19/10/97
MAC 4	Expo 254	1	20508	19/10/97
MAC 4	Expo 255	1	20509	19/10/97
MAC 4	Expo 256	1	20510	19/10/97

Group	Claim_Name	Units	Record_No.	Expiry_D
MAC 4	Expo 274	1	20528	19/10/97
MAC 4	Expo 501 Fr	1	20610	19/10/97
MAC 4	Expo 573	1	21221	14/11/97
MAC 4	Expo 574	1	21222	14/11/97
MAC 4	Expo 575	1	21223	14/11/97
MAC 4	Expo 576	1	21224	14/11/97
MAC 4	Expo 581	1	21229	14/11/97
MAC 4	Expo 582	1	21230	14/11/97
MAC 4	Expo 615	1	21235	14/11/97
MAC 4	Expo 616	1	21236	14/11/97

APPENDIX 2

ASSAY CERTIFICATES

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9014737

Comments: ATTN: PETER DASLER

CERTIFICATE A9014737

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	39	Geochem ring to approx 150 mesh
294	39	Crush and split (0-10 pounds)
238	39	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	39	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	39	Ag ppm: 9 element,soil and rock	ICP-AES	0.5	200
1929	39	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	39	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	39	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	39	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	39	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	39	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	39	Pb ppm: 9 element,soil and rock	ICP-AES	5	10000
1950	39	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 04-MAY-90
Invoice No. : I-9014737
P.O. Number :

CERTIFICATE OF ANALYSIS A9014737

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
142858	205	294	480	0.5	15	6240	11.05	45	49	6	25	158
142859	205	294	770	0.5	15	5940	9.43	90	39	8	10	194
142860	205	294	420	< 0.5	14	2460	7.17	15	120	6	70	56
142861	205	294	390	< 0.5	16	3120	6.88	10	131	9	20	32
142862	205	294	600	0.5	13	6580	5.92	15	216	30	10	48
142863	205	294	385	< 0.5	28	2750	7.20	10	306	9	10	30
142864	205	294	130	< 0.5	11	392	5.52	10	144	4	5	16
142865	205	294	160	< 0.5	12	423	5.28	10	77	4	5	16
142866	205	294	380	< 0.5	23	3810	7.01	10	86	7	5	36
142867	205	294	465	< 0.5	22	4350	7.87	10	97	5	10	36
142868	205	294	385	0.5	18	4900	7.21	5	132	6	5	38
142869	205	294	285	< 0.5	38	3880	9.93	20	102	10	15	102
142870	205	294	475	0.5	26	5640	11.10	30	119	7	5	170
142871	205	294	585	0.5	25	4630	12.80	35	65	6	10	156
142872	205	294	430	0.5	29	4950	12.00	45	104	7	< 5	202
142873	205	294	1640	2.0	27	6820	9.24	20	92	7	10	202
142874	205	294	540	0.5	23	4540	10.75	40	87	4	10	350
142875	205	294	835	0.5	34	4290	6.85	15	101	9	10	66
142876	205	294	385	< 0.5	27	2080	6.69	10	162	9	15	42
142877	205	294	690	0.5	26	4660	9.75	10	106	8	25	54
142878	205	294	845	1.0	38	8140	8.95	15	110	9	15	116
142879	205	294	710	1.0	23	5790	10.45	30	96	7	10	88
142880	205	294	805	1.0	20	6440	10.75	30	97	6	10	102
142881	205	294	920	1.0	27	7200	10.65	25	103	6	15	162
142882	205	294	1140	2.0	22	8150	9.61	15	119	6	20	94
142883	205	294	775	1.5	27	5870	9.97	110	91	6	15	220
142884	205	294	520	0.5	22	4380	9.86	315	64	7	15	478
142885	205	294	570	0.5	26	5340	9.84	205	93	5	10	426
142886	205	294	385	0.5	17	1600	6.18	20	84	3	15	70
142887	205	294	440	0.5	15	2320	8.67	15	55	5	10	36
142888	205	294	560	1.0	21	3700	9.53	40	51	6	25	248
142889	205	294	610	1.0	25	3980	10.35	170	55	5	25	538
142890	205	294	765	2.0	24	6110	8.96	20	80	8	10	226
142891	205	294	1000	1.0	26	5340	10.75	35	81	6	10	276
142892	205	294	530	0.5	20	3630	8.54	15	38	6	30	88
142893	205	294	255	< 0.5	16	1995	5.87	15	54	6	10	174
142894	205	294	675	0.5	25	4980	11.20	20	72	7	20	80
142895	205	294	550	< 0.5	24	3670	11.75	45	55	9	10	152
142896	205	294	790	0.5	26	5080	10.25	30	64	8	10	60

CERTIFICATION : B. Caglio

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9014772

Comments: ATTN: PETER DASTER

CERTIFICATE A9014772

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	78	Geochem ring to approx 150 mesh
294	78	Crush and split (0-10 pounds)
238	78	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	78	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	78	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	78	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	78	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	78	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	78	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	78	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	78	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	78	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	78	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASTER

Invoice Date: 09-MAY-90
Invoice No. : I-9014772
P.O. Number :

CERTIFICATE OF ANALYSIS A9014772

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
142851	205	294	680	1.0	18	4570	7.55	105	65	7	10	124
142852	205	294	60	< 0.5	12	586	4.12	10	18	4	10	56
142853	205	294	105	< 0.5	11	566	3.94	135	36	6	5	116
142854	205	294	55	< 0.5	11	413	4.72	750	17	3	5	374
142855	205	294	285	< 0.5	18	2070	6.20	35	54	11	10	60
142856	205	294	235	< 0.5	13	751	6.44	5	16	7	20	188
142857	205	294	485	< 0.5	12	3190	7.85	25	27	4	30	164
142897	205	294	810	< 0.5	17	5160	12.70	45	71	8	5	138
142898	205	294	850	0.5	15	4910	13.95	60	45	8	10	200
142899	205	294	310	< 0.5	15	1230	5.34	15	84	5	< 5	20
142900	205	294	915	1.0	21	4860	10.80	15	55	7	5	76
142901	205	294	865	1.0	19	4370	11.45	45	34	7	10	214
142902	205	294	730	0.5	17	4400	10.70	50	29	6	10	212
142903	205	294	825	1.0	22	4410	9.92	65	44	7	10	150
142904	205	294	715	0.5	16	3160	9.19	15	31	7	5	56
142905	205	294	895	0.5	19	4020	8.07	10	39	6	< 5	48
142906	205	294	1510	0.5	23	8640	8.73	15	37	6	5	78
142907	205	294	925	0.5	22	4460	11.80	10	43	8	5	516
142908	205	294	1090	0.5	17	5690	10.10	15	39	5	< 5	58
142909	205	294	400	< 0.5	19	1775	12.15	5	37	7	< 5	30
142910	205	294	280	< 0.5	16	632	6.38	10	59	4	< 5	32
142911	205	294	260	< 0.5	18	1055	6.52	25	68	5	< 5	26
142912	205	294	610	< 0.5	22	2230	9.67	20	50	6	5	26
142913	205	294	435	< 0.5	22	2080	9.19	5	50	7	< 5	22
142914	205	294	400	< 0.5	16	2150	8.21	20	33	7	< 5	24
142915	205	294	295	< 0.5	14	2060	7.46	10	53	6	< 5	34
142916	205	294	585	< 0.5	24	3040	8.02	15	53	7	< 5	26
142917	205	294	595	< 0.5	24	2850	8.18	25	34	7	< 5	30
142918	205	294	410	< 0.5	22	1225	9.84	10	37	6	< 5	22
142919	205	294	595	< 0.5	26	3100	10.80	5	25	8	< 5	36
142920	205	294	1000	0.5	23	6770	10.20	5	45	8	< 5	42
142921	205	294	1090	0.5	13	5720	10.50	15	23	6	5	90
142922	205	294	1100	0.5	11	4240	12.80	15	34	4	< 5	106
142923	205	294	645	< 0.5	14	984	9.17	15	21	5	< 5	42
142924	205	294	200	< 0.5	28	396	9.90	15	14	5	10	110
142925	205	294	540	0.5	19	2200	8.00	10	20	9	5	172
142926	205	294	500	0.5	19	2600	6.54	15	48	5	5	80
142927	205	294	520	1.0	17	3490	7.48	50	46	5	5	222
142928	205	294	730	1.0	10	2830	10.30	75	27	3	10	524
142929	205	294	420	0.5	2	841	4.73	15	28	2	5	42

CERTIFICATION : Ivan Bilan

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASTER

Invoice Date: 09-MAY-90
Invoice No. : I-9014772
P.O. Number :

CERTIFICATE OF ANALYSIS A9014772

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
142930	205	294	160	< 0.5	1	311	5.60	65	145	< 1	< 5	340
142931	205	294	205	0.5	7	1230	4.48	35	195	2	10	120
142932	205	294	770	0.5	18	6890	7.85	10	174	6	15	54
142933	205	294	540	1.0	26	8300	7.80	10	99	7	5	50
142934	205	294	260	< 0.5	35	3360	8.39	10	65	9	< 5	32
142935	205	294	885	1.0	23	8260	8.43	10	138	5	< 5	260
142936	205	294	765	1.0	25	9070	8.37	10	86	5	< 5	52
142937	205	294	850	0.5	34	8850	7.59	10	83	7	< 5	46
142938	205	294	435	0.5	7	4300	3.40	15	73	3	5	126
142939	205	294	595	1.0	19	7730	6.77	15	121	4	5	48
142940	205	294	390	< 0.5	18	2280	8.33	5	78	5	10	50
142941	205	294	180	< 0.5	10	1110	4.75	5	27	4	5	102
142942	205	294	1100	1.0	23	6120	8.53	10	56	5	10	60
142943	205	294	595	1.0	22	8160	10.95	10	93	5	5	48
142944	205	294	745	< 0.5	20	3870	11.95	10	153	5	< 5	38
142945	205	294	315	< 0.5	33	954	11.00	10	130	5	< 5	20
142946	205	294	240	< 0.5	30	2340	9.96	20	91	4	5	32
142947	205	294	320	< 0.5	37	498	10.15	15	111	5	10	36
142948	205	294	490	< 0.5	29	4530	11.80	10	148	5	5	42
142949	205	294	420	0.5	28	5820	8.78	10	162	6	< 5	36
142950	205	294	265	< 0.5	20	2170	7.75	10	109	4	< 5	26
142951	205	294	270	< 0.5	23	1675	8.68	10	153	5	< 5	20
142952	205	294	580	< 0.5	22	4230	10.35	15	224	5	< 5	40
142953	205	294	255	< 0.5	24	2080	9.19	10	111	4	< 5	26
142954	205	294	155	< 0.5	14	1640	7.53	15	128	6	< 5	38
142955	205	294	130	< 0.5	12	1045	9.77	140	23	11	15	84
142956	205	294	90	< 0.5	16	885	11.95	50	46	16	20	46
142957	205	294	185	< 0.5	13	1750	4.84	130	53	14	20	98
142958	205	294	250	< 0.5	25	3270	3.96	180	72	18	20	76
142959	205	294	200	< 0.5	40	2610	4.06	120	24	13	10	36
142960	205	294	330	0.5	46	4070	4.52	100	21	17	5	40
142961	205	294	475	< 0.5	18	3750	2.42	100	37	11	5	34
142962	205	294	285	< 0.5	12	2890	2.70	95	50	10	15	34
142963	205	294	200	< 0.5	8	1040	2.38	75	18	4	5	22
142964	205	294	130	< 0.5	11	1355	2.18	75	43	5	5	26
142965	205	294	390	0.5	21	3320	2.59	80	316	10	< 5	30
142966	205	294	430	0.5	32	4390	3.01	85	80	18	< 5	38
142967	205	294	365	0.5	40	5220	3.94	85	45	24	5	44

CERTIFICATION : Ian Bichler

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9014929

Comments: ATTN: PETER DASLER

CERTIFICATE A9014929

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 11-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	33	Geochem ring to approx 150 mesh
294	33	Crush and split (0-10 pounds)
238	33	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	33	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	33	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	33	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	33	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	33	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	33	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	33	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	33	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	33	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	33	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 10-MAY-90
Invoice No. : I-9014929
P.O. Number :

CERTIFICATE OF ANALYSIS A9014929

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
142968	205	294	50	< 0.5	26	680	3.72	135	5	14	4	20
142969	205	294	95	< 0.5	38	1185	4.19	180	44	18	58	68
142970	205	294	45	< 0.5	32	624	3.67	145	24	15	8	22
142971	205	294	50	< 0.5	40	1050	3.58	105	20	14	2	22
142972	205	294	50	< 0.5	40	1275	4.38	90	144	22	< 2	22
142973	205	294	25	< 0.5	27	218	4.69	125	3	24	< 2	20
142974	205	294	15	< 0.5	22	402	3.35	125	30	10	4	26
142975	205	294	20	< 0.5	18	326	3.00	150	18	7	28	38
142976	205	294	15	< 0.5	19	211	2.80	100	24	5	2	22
142977	205	294	30	< 0.5	23	275	3.33	95	20	9	6	20
142978	205	294	< 5	< 0.5	24	89	4.09	150	1	20	6	18
142979	205	294	10	< 0.5	28	188	3.61	180	35	23	6	62
142980	205	294	5	< 0.5	32	79	4.13	140	2	21	< 2	28
142981	205	294	< 5	< 0.5	27	116	3.80	125	2	17	12	50
142982	205	294	10	< 0.5	27	155	4.57	110	3	16	4	20
142983	205	294	< 5	< 0.5	29	159	4.55	100	9	17	4	22
142984	205	294	15	< 0.5	37	253	4.32	105	35	26	< 2	22
142985	205	294	10	< 0.5	25	168	3.48	145	2	25	44	96
142986	205	294	10	< 0.5	44	123	5.42	160	2	42	< 2	32
142987	205	294	10	< 0.5	43	129	5.47	195	< 1	40	< 2	30
142988	205	294	15	< 0.5	21	60	3.97	205	< 1	20	< 2	20
142989	205	294	5	< 0.5	15	67	3.11	90	1	4	< 2	16
142990	205	294	< 5	< 0.5	19	60	3.52	175	1	17	2	22
142991	205	294	10	< 0.5	24	50	3.89	200	2	20	4	22
142992	205	294	130	< 0.5	24	1230	4.23	5	44	9	2	18
142993	205	294	145	< 0.5	29	1040	9.87	< 5	36	8	< 2	24
142994	205	294	135	< 0.5	23	1100	6.31	5	36	10	< 2	18
142995	205	294	135	< 0.5	29	854	6.66	< 5	44	10	< 2	20
142996	205	294	175	< 0.5	25	2190	6.37	< 5	27	12	< 2	26
142997	205	294	185	< 0.5	32	745	7.47	< 5	17	13	< 2	16
142998	205	294	75	< 0.5	18	1580	3.98	< 5	15	10	< 2	14
142999	205	294	50	< 0.5	17	412	4.23	< 5	15	10	2	16
143000	205	294	260	< 0.5	23	489	6.50	5	56	8	8	16

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015030

Comments: ATTN: PETER DASLER

CERTIFICATE A9015030

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # : NONE

Samples submitted to our lab in Vancouver, BC.
This report was printed on 14-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	27	Geochem ring to approx 150 mesh
294	27	Crush and split (0-10 pounds)
238	27	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	27	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	27	Ag ppm: 9 element,soil and rock	ICP-AES	0.5	200
1929	27	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	27	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	27	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	27	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	27	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	27	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	27	Pb ppm: 9 element,soil and rock	ICP-AES	5	10000
1950	27	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 14-MAY-90
Invoice No. : I-9015030
P.O. Number : NONE

CERTIFICATE OF ANALYSIS A9015030

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33101	205	294	245	< 0.5	16	803	4.83	10	19	9	10	18
33102	205	294	70	< 0.5	22	198	5.53	5	108	9	8	12
33103	205	294	100	< 0.5	23	403	5.91	5	155	10	12	28
33104	205	294	50	< 0.5	5	112	2.02	5	128	2	2	4
33105	205	294	90	< 0.5	15	190	5.04	10	112	7	2	18
33106	205	294	70	< 0.5	23	144	4.78	10	61	12	6	16
33107	205	294	55	< 0.5	21	247	4.40	5	39	10	8	16
33108	205	294	110	< 0.5	23	156	5.92	15	47	8	6	14
33109	205	294	60	< 0.5	20	131	5.80	10	26	7	8	16
33110	205	294	85	< 0.5	19	228	5.09	5	14	8	6	14
33111	205	294	90	< 0.5	18	255	5.60	10	11	8	6	12
33112	205	294	60	< 0.5	8	87	2.40	5	6	4	2	6
33113	205	294	85	< 0.5	14	109	3.83	10	33	5	6	12
33114	205	294	65	< 0.5	26	100	6.50	10	14	11	6	12
33115	205	294	45	< 0.5	24	60	4.84	5	8	9	6	12
33116	205	294	50	< 0.5	20	58	6.57	10	16	9	6	12
33117	205	294	45	< 0.5	22	161	4.47	5	3	10	12	10
33118	205	294	40	< 0.5	17	67	3.25	5	5	9	6	6
33119	205	294	25	< 0.5	2	57	0.89	15	13	2	< 2	6
33120	205	294	15	< 0.5	3	45	1.06	20	8	3	2	8
33121	205	294	25	< 0.5	23	76	4.67	5	2	10	8	8
33122	205	294	25	< 0.5	15	45	3.03	10	2	7	2	6
33123	205	294	55	< 0.5	26	51	4.77	5	< 1	12	2	6
33124	205	294	35	< 0.5	25	50	5.19	5	< 1	12	< 2	6
33125	205	294	40	< 0.5	20	56	4.97	5	3	10	2	6
33126	205	294	25	< 0.5	21	125	3.93	5	< 1	11	2	6
33127	205	294	25	< 0.5	21	107	5.01	5	< 1	12	2	10

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015054

Comments:

CERTIFICATE A9015054

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 11-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
207	2	Assay pulv, screen -150, roll
294	2	Crush and split (0-10 pounds)

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
880	2	Au oz/t: Total, metallics calc	FA-AAS/GRAV	0.001	20.000
884	2	Au- oz/t: Metallics calculation	FA-AAS/GRAV	0.001	20.000
887	2	Au+ mg: Metallics calculation	FA-AAS/GRAV	0.001	50.000
889	2	Weight- g: Metallics calculation	BALANCE	1	N/A
888	2	Weight+ g: Metallics calculation	BALANCE	0.01	N/A
301	2	Cu %: HClO4-HNO3 digestion	AAS	0.01	100.0

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments:

Invoice Date: 11-MAY-90
Invoice No. : I-9015054
P.O. Number :

CERTIFICATE OF ANALYSIS A9015054

SAMPLE DESCRIPTION	PREP CODE		Au tot oz/t	Au - oz/t	Au + mg	Wt. - grams	Wt. + grams	Cu %				
142858 RESPLIT	207	294	0.020	0.020	0.004	323	3.93	0.59				
142891 RESPLIT	207	294	0.026	0.026	0.005	348	4.94	0.49				

CERTIFICATION : W. Glen Mackenzie

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015174

Comments: ATTN:PETER DASLER

CERTIFICATE A9015174

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	26	Geochem ring to approx 150 mesh
294	26	Crush and split (0-10 pounds)
238	26	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	26	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	26	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	26	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	26	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	26	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	26	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	26	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	26	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	26	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	26	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN:PETER DASLER

Invoice Date: 16-MAY-90
Invoice No. : I-9015174
P.O. Number :

CERTIFICATE OF ANALYSIS A9015174

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33128	205 294	25	< 0.5	17	82	4.74	10	2	13	4	8
33129	205 294	50	< 0.5	26	140	6.27	10	7	12	< 2	12
33130	205 294	40	< 0.5	13	167	3.41	10	1	6	2	8
33131	205 294	45	< 0.5	6	308	2.24	15	8	4	< 2	14
33132	205 294	20	< 0.5	14	104	4.39	5	1	6	< 2	8
33133	205 294	10	< 0.5	19	98	5.91	5	< 1	7	2	20
33134	205 294	35	< 0.5	19	189	5.24	5	< 1	9	2	8
33135	205 294	30	< 0.5	23	256	7.15	10	5	14	< 2	14
33136	205 294	20	< 0.5	14	61	3.79	30	< 1	9	< 2	22
33137	205 294	10	< 0.5	6	35	1.21	5	< 1	4	< 2	4
33138	205 294	25	< 0.5	14	221	5.03	10	1	9	< 2	10
33139	205 294	< 5	< 0.5	21	116	5.66	10	1	24	< 2	10
33140	205 294	15	< 0.5	17	153	5.55	20	3	10	6	26
33141	205 294	10	< 0.5	17	49	5.15	60	1	9	4	32
33142	205 294	15	< 0.5	18	54	4.58	10	1	9	< 2	8
33143	205 294	5	< 0.5	17	15	4.16	10	7	12	2	8
33144	205 294	10	< 0.5	16	15	4.34	10	17	11	2	8
33145	205 294	5	< 0.5	16	13	4.17	10	29	13	2	8
33146	205 294	10	< 0.5	18	94	4.82	70	4	12	< 2	24
33147	205 294	10	< 0.5	15	16	4.04	200	2	9	4	26
33148	205 294	< 5	< 0.5	15	50	4.39	400	3	9	2	46
33149	205 294	< 5	< 0.5	11	29	3.48	630	1	6	2	54
33150	205 294	10	< 0.5	16	63	3.70	490	2	9	6	58
33151	205 294	10	< 0.5	16	40	4.48	450	< 1	5	2	42
33152	205 294	15	< 0.5	15	123	4.70	455	3	6	10	70
33153	205 294	5	< 0.5	12	29	3.47	645	1	6	6	50

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015316

Comments: ATTN: PETER DASLER

CERTIFICATE A9015316

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # : NONE

Samples submitted to our lab in Vancouver, BC.
This report was printed on 17-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	48	Geochem ring to approx 150 mesh
294	48	Crush and split (0-10 pounds)
238	48	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	48	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	48	Ag ppm: 9 element,soil and rock	ICP-AES	0.5	200
1929	48	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	48	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	48	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	48	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	48	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	48	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	48	Pb ppm: 9 element,soil and rock	ICP-AES	5	10000
1950	48	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 17-MAY-90
Invoice No. : I-9015316
P.O. Number : NONE

CERTIFICATE OF ANALYSIS A9015316

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33154	205	294	240	< 0.5	1	49	0.83	50	72	1	22	14
33155	205	294	340	< 0.5	< 1	68	1.44	10	98	1	18	14
33156	205	294	310	< 0.5	< 1	60	1.28	15	126	< 1	12	12
33157	205	294	335	< 0.5	< 1	70	1.33	30	120	2	16	20
33158	205	294	135	< 0.5	< 1	20	0.40	20	94	1	10	12
33159	205	294	215	< 0.5	< 1	42	0.72	20	155	1	10	8
33160	205	294	95	< 0.5	< 1	31	0.73	10	121	< 1	4	4
33161	205	294	170	< 0.5	< 1	129	3.62	15	250	1	14	10
33162	205	294	115	< 0.5	< 1	23	0.47	10	65	1	4	4
33163	205	294	120	< 0.5	< 1	51	1.29	20	77	1	10	6
33164	205	294	150	< 0.5	< 1	28	0.57	15	68	< 1	4	4
33165	205	294	150	< 0.5	< 1	116	2.77	25	277	1	10	10
33166	205	294	100	< 0.5	< 1	41	0.96	25	110	2	8	8
33167	205	294	125	< 0.5	< 1	75	1.05	20	58	2	14	6
33168	205	294	100	< 0.5	< 1	50	0.75	25	94	2	14	8
33169	205	294	55	< 0.5	< 1	18	0.27	25	36	2	2	6
33170	205	294	60	< 0.5	< 1	21	0.24	25	14	2	10	10
33171	205	294	105	< 0.5	< 1	129	1.20	20	71	2	14	8
33172	205	294	200	< 0.5	1	159	1.74	10	113	1	36	8
33173	205	294	300	< 0.5	< 1	107	2.08	20	86	2	22	8
33174	205	294	425	< 0.5	1	99	2.23	25	88	2	20	10
33175	205	294	85	< 0.5	6	84	1.06	10	56	3	4	4
33176	205	294	75	< 0.5	7	109	1.21	10	45	4	4	4
33177	205	294	100	< 0.5	4	166	0.99	15	29	3	14	6
33178	205	294	60	< 0.5	7	161	1.26	5	45	2	2	4
33179	205	294	80	< 0.5	6	284	1.01	5	52	3	6	4
33180	205	294	65	< 0.5	5	283	0.69	5	19	3	4	6
33181	205	294	55	< 0.5	11	204	1.06	5	17	4	< 2	4
33182	205	294	90	< 0.5	22	426	2.30	10	30	8	< 2	6
33183	205	294	115	< 0.5	15	1045	2.04	15	35	9	2	12
33184	205	294	60	< 0.5	2	87	0.64	20	33	2	< 2	4
33185	205	294	75	< 0.5	1	153	0.65	10	46	3	4	6
33186	205	294	65	< 0.5	7	62	0.94	5	26	3	4	2
33187	205	294	100	< 0.5	2	233	1.59	5	66	1	4	4
33188	205	294	80	< 0.5	1	140	0.63	20	64	2	4	6
33189	205	294	25	< 0.5	1	31	0.27	10	38	2	< 2	2
33190	205	294	55	< 0.5	2	141	0.87	10	27	3	4	4
33191	205	294	40	< 0.5	1	86	0.59	5	53	1	< 2	2
33192	205	294	80	< 0.5	4	202	0.97	15	58	3	6	6
33193	205	294	90	< 0.5	5	164	1.72	20	55	3	4	6

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 17-MAY-90
Invoice No. : I-9015316
P.O. Number : NONE

CERTIFICATE OF ANALYSIS A9015316

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33194	205	294	130	< 0.5	11	735	2.39	15	54	7	4	10
33195	205	294	130	< 0.5	11	564	2.82	40	65	5	2	10
33196	205	294	70	< 0.5	3	157	0.85	15	57	4	< 2	6
33197	205	294	145	< 0.5	6	678	1.49	10	59	4	4	8
33198	205	294	220	< 0.5	10	191	2.77	20	73	4	4	10
33199	205	294	260	1.0	15	318	3.13	20	71	7	6	12
33200	205	294	95	< 0.5	2	82	0.89	20	51	6	4	6
33201	205	294	90	< 0.5	4	70	1.28	25	53	5	4	6

CERTIFICATION : B. Caglioni

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015330

Comments: ATTN: PETER DASLER

CERTIFICATE A9015330

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	40	Geochem ring to approx 150 mesh
272	40	Crush and split (11-20 pounds)
238	40	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	40	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	40	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	40	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	40	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	40	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	40	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	40	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	40	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	40	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	40	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 23-MAY-90
Invoice No. : I-9015330
P.O. Number :

CERTIFICATE OF ANALYSIS A9015330

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33202	205 272	135	< 0.5	3	96	1.47	60	91	4	16	134
33203	205 272	85	< 0.5	< 1	41	0.47	35	20	2	10	10
33204	205 272	100	< 0.5	6	82	1.52	80	73	4	4	8
33205	205 272	180	< 0.5	10	74	1.78	15	94	3	4	6
33206	205 272	70	< 0.5	3	69	0.72	25	64	2	4	6
33207	205 272	50	< 0.5	< 1	24	0.21	20	64	1	4	4
33208	205 272	70	< 0.5	< 1	25	0.29	20	88	1	6	4
33209	205 272	95	< 0.5	< 1	42	0.32	30	103	1	4	4
33210	205 272	90	< 0.5	< 1	28	0.19	55	102	2	4	6
33211	205 272	55	< 0.5	< 1	27	0.20	25	137	2	4	2
33212	205 272	75	< 0.5	< 1	21	0.20	35	75	2	2	4
33213	205 272	85	< 0.5	1	71	0.48	20	79	1	4	4
33214	205 272	95	< 0.5	2	143	1.26	15	160	2	8	4
33215	205 272	85	< 0.5	< 1	58	0.39	25	92	1	4	6
33216	205 272	75	< 0.5	< 1	50	0.37	30	65	2	6	6
33217	205 272	75	< 0.5	2	63	0.66	30	116	2	4	4
33218	205 272	60	< 0.5	1	82	0.47	35	70	2	4	6
33219	205 272	105	< 0.5	4	285	1.15	40	98	4	6	8
33220	205 272	50	< 0.5	< 1	42	0.35	45	86	2	4	6
33221	205 272	45	< 0.5	< 1	51	0.29	50	57	2	4	6
33222	205 272	75	< 0.5	< 1	106	0.25	35	39	2	4	10
33223	205 272	75	< 0.5	< 1	1400	0.57	30	73	3	6	14
33224	205 272	40	< 0.5	1	87	0.39	60	40	3	8	16
33225	205 272	65	< 0.5	1	123	0.36	40	71	2	2	6
33226	205 272	100	< 0.5	1	110	0.34	35	55	2	2	8
33227	205 272	120	< 0.5	3	221	1.29	50	87	4	6	12
33228	205 272	65	< 0.5	1	174	0.34	45	53	3	8	12
33229	205 272	80	< 0.5	< 1	65	0.24	25	43	2	8	6
33230	205 272	80	< 0.5	< 1	93	0.22	25	69	2	4	8
33231	205 272	150	< 0.5	3	232	1.43	30	79	3	6	10
33232	205 272	65	< 0.5	< 1	111	0.24	35	99	1	2	10
33233	205 272	80	< 0.5	1	106	0.43	30	70	2	2	6
33234	205 272	90	< 0.5	3	381	0.94	20	56	2	2	8
33235	205 272	145	< 0.5	3	350	1.89	20	55	3	6	10
33236	205 272	115	< 0.5	< 1	986	1.16	30	50	1	4	10
33237	205 272	110	< 0.5	1	1825	0.74	30	53	2	2	10
33238	205 272	60	< 0.5	< 1	135	0.42	25	56	2	6	4
33239	205 272	135	< 0.5	< 1	111	0.50	25	43	1	4	4
33240	205 272	95	< 0.5	1	151	0.65	15	39	1	6	4
33241	205 272	280	0.5	85	4860	6.07	15	136	52	6	20

CERTIFICATION : B. Caglione

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

A9015523

Comments: ATTN: PETER DASLER

CERTIFICATE A9015523

DAIWAN ENGINEERING LTD.

Project: EXPO
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-MAY-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	50	Geochem ring to approx 150 mesh
294	50	Crush and split (0-10 pounds)
238	50	NITRIC-AQUA REGIA DIGESTION

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	50	Au ppb: Fuse 10 g sample	FA-AAS	5	10000
1005	50	Ag ppm: 9 element, soil and rock	ICP-AES	0.5	200
1929	50	Co ppm: 9 element, soil & rock	ICP-AES	1	10000
1931	50	Cu ppm: 9 element, soil & rock	ICP-AES	1	10000
1932	50	Fe %: 9 element, soil & rock	ICP-AES	0.01	15.00
1937	50	Mn ppm: 9 element, soil & rock	ICP-AES	5	10000
1938	50	Mo ppm: 9 element, soil & rock	ICP-AES	1	10000
1940	50	Ni ppm: 9 element, soil & rock	ICP-AES	1	10000
1004	50	Pb ppm: 9 element, soil and rock	ICP-AES	5	10000
1950	50	Zn ppm: 9 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 24-MAY-90
Invoice No. : I-9015523
P.O. Number :

CERTIFICATE OF ANALYSIS A9015523

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33242	205	294	130	< 0.5	45	1000	8.72	15	145	72	8	28
33243	205	294	205	< 0.5	31	1465	6.65	15	89	25	6	28
33244	205	294	170	< 0.5	31	803	7.35	10	80	23	8	22
33245	205	294	115	< 0.5	19	573	5.12	5	53	15	< 2	14
33246	205	294	65	< 0.5	18	412	4.73	5	33	11	6	12
33247	205	294	60	< 0.5	23	258	6.00	5	33	15	8	16
33248	205	294	70	< 0.5	22	327	4.48	5	6	17	12	14
33249	205	294	75	< 0.5	25	460	4.25	5	4	16	6	16
33250	205	294	95	< 0.5	24	405	4.05	5	8	15	10	14
33801	205	294	70	< 0.5	28	205	5.09	5	5	19	4	10
33802	205	294	30	< 0.5	22	78	3.49	5	3	14	< 2	6
33803	205	294	35	< 0.5	19	136	3.89	5	5	13	2	6
33804	205	294	35	< 0.5	23	138	4.23	5	6	14	2	8
33805	205	294	30	< 0.5	25	127	4.38	5	5	14	4	6
33806	205	294	115	< 0.5	28	329	4.45	5	9	12	4	8
33807	205	294	50	< 0.5	27	111	4.34	5	14	14	< 2	12
33808	205	294	65	< 0.5	27	245	5.19	5	10	15	4	10
33809	205	294	85	< 0.5	24	203	4.40	5	10	13	8	8
33810	205	294	75	< 0.5	13	313	4.04	10	6	7	2	10
33811	205	294	75	< 0.5	21	154	5.25	5	2	11	< 2	8
33812	205	294	50	< 0.5	27	93	4.66	5	4	18	< 2	6
33813	205	294	40	< 0.5	15	347	5.53	5	5	8	< 2	12
33814	205	294	20	< 0.5	22	47	4.55	5	4	12	2	6
33815	205	294	40	< 0.5	23	385	7.25	10	2	23	4	10
33816	205	294	50	< 0.5	25	169	8.22	10	2	22	< 2	8
33817	205	294	65	< 0.5	31	122	7.65	5	1	22	2	8
33818	205	294	40	< 0.5	35	91	7.30	5	1	39	2	8
33819	205	294	40	< 0.5	35	103	6.97	5	1	40	2	8
33820	205	294	45	< 0.5	33	139	6.99	5	5	23	2	14
33821	205	294	30	< 0.5	27	117	7.02	5	9	17	2	8
33822	205	294	10	< 0.5	21	69	4.91	5	1	15	< 2	6
33823	205	294	40	< 0.5	52	192	8.58	5	1	37	2	10
33824	205	294	80	< 0.5	29	73	4.42	5	7	20	< 2	6
33825	205	294	20	< 0.5	19	34	4.55	15	2	10	< 2	6
33826	205	294	10	< 0.5	14	45	3.85	10	3	7	< 2	6
33827	205	294	20	< 0.5	18	41	3.88	10	1	10	< 2	4
33828	205	294	10	< 0.5	13	44	2.60	15	3	6	< 2	4
33829	205	294	5	< 0.5	2	82	1.37	5	4	2	< 2	4
33830	205	294	30	< 0.5	5	258	2.78	25	4	3	< 2	6
33831	205	294	30	< 0.5	22	123	5.50	5	5	21	< 2	8

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 24-MAY-90
Invoice No. : I-9015523
P.O. Number :

CERTIFICATE OF ANALYSIS A9015523

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
33832	205	294	55	< 0.5	33	119	8.69	10	2	43	< 2	14
33833	205	294	35	< 0.5	43	103	7.93	10	1	45	< 2	12
33834	205	294	40	< 0.5	30	37	7.97	5	< 1	41	< 2	18
33835	205	294	30	< 0.5	39	74	9.61	15	4	32	< 2	48
33836	205	294	45	< 0.5	31	149	7.21	85	< 1	17	< 2	26
33837	205	294	25	< 0.5	34	45	6.38	5	1	29	< 2	244
33838	205	294	80	< 0.5	11	131	5.95	10	12	7	8	572
33839	205	294	45	< 0.5	20	208	4.71	10	5	13	6	12
33840	205	294	35	< 0.5	20	358	6.36	30	3	14	12	30
33841	205	294	10	< 0.5	6	52	2.57	5	11	5	2	218

CERTIFICATION : B. Caughlin

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project: EXPO
Comments:

Invoice Date: 30-MAY-90
Invoice No. : I-9015615
P.O. Number :

CERTIFICATE OF ANALYSIS A9015615

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
27301	205	272	< 5	< 0.5	15	89	4.91	1570	1	10	22	158
27302	205	272	< 5	< 0.5	17	154	5.68	1710	< 1	15	10	190
27303	205	272	< 5	< 0.5	17	253	4.52	1555	< 1	9	10	146
27304	205	272	95	< 0.5	20	128	5.57	1230	1	9	8	124
27305	205	272	5	< 0.5	15	106	3.53	240	3	10	24	50
27306	205	272	< 5	< 0.5	5	10	0.98	15	< 1	5	8	6
33842	205	272	10	< 0.5	24	134	5.92	10	6	17	48	24
33843	205	272	< 5	< 0.5	21	114	6.10	1195	1	12	10	142
33844	205	272	< 5	< 0.5	17	69	5.03	1525	1	14	38	242
33845	205	272	< 5	< 0.5	21	109	4.85	1645	< 1	19	40	214
33846	205	272	< 5	< 0.5	20	133	5.21	1575	< 1	23	30	210
33847	205	272	< 5	< 0.5	16	160	4.80	1365	1	9	20	186
33848	205	272	< 5	< 0.5	18	61	4.21	940	2	8	8	110
33849	205	272	< 5	< 0.5	18	31	4.52	810	< 1	8	14	102
33850	205	272	10	< 0.5	16	38	4.51	765	< 1	12	4	70
109501	205	272	55	0.5	1	22	0.54	30	55	1	4	4
109502	205	272	75	< 0.5	1	32	0.75	15	53	1	4	4
109503	205	272	70	0.5	1	30	0.51	10	51	2	2	2
109504	205	272	45	< 0.5	< 1	26	0.15	10	29	1	8	4
109505	205	272	50	< 0.5	< 1	34	0.21	25	63	1	16	8
109506	205	272	85	< 0.5	< 1	35	0.24	25	99	1	10	6
109507	205	272	70	< 0.5	1	48	0.59	15	131	1	6	6
109508	205	272	110	< 0.5	2	82	0.64	20	78	2	6	6
109509	205	272	95	< 0.5	1	57	0.67	25	87	1	6	6
109510	205	272	70	< 0.5	< 1	34	0.48	30	115	2	4	6
109511	205	272	90	< 0.5	< 1	37	0.30	10	55	< 1	2	4
109512	205	272	55	< 0.5	1	55	0.23	15	68	1	2	2
109513	205	272	60	< 0.5	< 1	40	0.54	10	64	1	4	4
109514	205	272	145	< 0.5	3	191	2.29	10	82	1	4	6
109515	205	272	75	< 0.5	< 1	51	0.35	15	77	1	4	4
109516	205	272	90	< 0.5	< 1	115	0.69	15	104	< 1	4	4
109517	205	272	140	< 0.5	1	91	0.63	15	98	1	6	6
109518	205	272	130	< 0.5	< 1	72	0.20	10	55	< 1	2	2
109519	205	272	95	< 0.5	1	79	0.30	20	75	1	10	6
109520	205	272	110	< 0.5	2	179	1.01	10	107	1	6	6
109521	205	272	140	< 0.5	5	511	1.89	15	95	2	4	12
109522	205	272	200	0.5	5	1150	4.31	30	190	2	28	40

CERTIFICATION : _____

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 30-MAY-90
Invoice No. : I-9015643
P.O. Number :

CERTIFICATE OF ANALYSIS A9015643

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
109523	205	294	125	< 0.5	1	498	0.98	25	84	1	6	8
109524	205	294	70	< 0.5	1	80	0.42	25	85	1	2	4
109525	205	294	105	< 0.5	1	88	0.60	10	100	1	4	4
109526	205	294	110	< 0.5	< 1	43	0.37	15	101	1	4	4
109527	205	294	75	< 0.5	< 1	33	0.20	15	85	1	2	4
109528	205	294	75	< 0.5	< 1	406	0.27	10	84	< 1	2	4
109529	205	294	30	0.5	< 1	36	0.32	5	45	< 1	6	< 2
109530	205	294	50	0.5	1	31	0.27	10	76	< 1	10	2
109531	205	294	80	0.5	< 1	31	0.45	10	164	< 1	14	2
109532	205	294	30	0.5	< 1	18	0.38	10	61	< 1	8	2
109533	205	294	110	0.5	1	48	0.56	30	71	1	72	28
109534	205	294	295	1.0	13	893	2.39	15	30	3	8	16
109535	205	294	200	0.5	5	255	1.16	20	22	3	138	46
109536	205	294	400	2.0	20	2490	6.80	20	58	5	18	30
109537	205	294	595	0.5	25	718	9.02	10	53	7	84	30
109538	205	294	800	1.0	33	913	10.50	15	52	9	58	30
109539	205	294	500	< 0.5	25	588	6.95	15	56	7	22	14
109540	205	294	315	< 0.5	21	409	6.01	10	56	7	12	12
109541	205	294	690	< 0.5	18	913	8.45	15	59	5	10	26
109542	205	294	310	< 0.5	15	411	5.86	15	60	6	16	12
109543	205	294	215	< 0.5	16	495	5.26	10	57	6	6	12
109544	205	294	390	< 0.5	14	396	4.46	15	49	5	8	12
109545	205	294	235	< 0.5	10	500	3.43	10	72	3	2	10
109546	205	294	105	< 0.5	2	308	1.13	15	59	1	6	8
109547	205	294	75	< 0.5	1	138	0.48	10	45	1	4	4
109548	205	294	70	< 0.5	1	414	0.59	20	25	1	4	4

CERTIFICATION : _____

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project: EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 30-MAY-90
Invoice No. : I-9015832
P.O. Number :

CERTIFICATE OF ANALYSIS A9015832

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
109549	205	272	75	< 0.5	1	600	0.99	15	73	1	2	8
109550	205	272	65	< 0.5	1	268	0.85	10	58	< 1	2	6
109551	205	272	75	< 0.5	1	495	0.67	10	64	1	6	8
109552	205	272	60	< 0.5	1	131	0.64	20	75	1	4	6
109553	205	272	65	< 0.5	< 1	138	0.55	35	77	1	2	8
109554	205	272	90	< 0.5	< 1	299	0.85	20	60	1	4	6
109555	205	272	90	< 0.5	< 1	216	0.38	15	99	1	6	6
109556	205	272	120	< 0.5	< 1	1050	1.25	15	117	< 1	4	14
109557	205	272	80	< 0.5	< 1	579	0.82	10	117	< 1	4	8
109558	205	272	65	< 0.5	< 1	108	0.29	10	88	1	2	4
109559	205	272	65	< 0.5	< 1	152	0.45	15	82	1	6	6
109560	205	272	55	< 0.5	< 1	36	0.17	15	69	< 1	2	8
109561	205	272	45	< 0.5	< 1	47	0.24	20	78	< 1	2	6
109562	205	272	140	< 0.5	< 1	204	1.43	15	160	1	4	6
109563	205	272	75	< 0.5	< 1	380	0.64	15	278	1	4	8
109564	205	272	180	< 0.5	2	1530	1.60	10	216	1	6	12
109565	205	272	30	< 0.5	< 1	74	0.11	10	118	< 1	4	4
109566	205	272	45	< 0.5	< 1	75	0.13	10	201	1	2	6
109567	205	272	65	< 0.5	< 1	64	0.14	5	176	1	2	6
109568	205	272	60	< 0.5	< 1	448	0.22	15	57	< 1	2	8
109569	205	272	115	< 0.5	1	395	0.71	10	89	< 1	8	6
109570	205	272	75	< 0.5	1	131	0.56	10	66	< 1	8	6
109571	205	272	105	< 0.5	8	141	2.58	35	69	4	8	8
109572	205	272	155	< 0.5	3	98	1.75	10	132	1	14	6
109573	205	272	105	< 0.5	< 1	63	0.46	15	105	1	16	8
109574	205	272	240	1.0	1	486	2.80	20	166	1	22	12
109575	205	272	205	< 0.5	1	272	2.91	15	213	1	8	10
109576	205	272	400	0.5	12	5080	4.64	20	93	4	8	38
109577	205	272	55	< 0.5	1	90	0.57	25	64	< 1	4	4
109578	205	272	25	< 0.5	< 1	100	0.21	10	11	< 1	< 2	2
109579	205	272	30	< 0.5	< 1	30	0.29	15	22	< 1	2	4
109580	205	272	40	< 0.5	< 1	31	0.12	10	93	< 1	< 2	6
109581	205	272	45	< 0.5	< 1	33	0.15	35	154	1	4	6
109582	205	272	50	< 0.5	1	575	0.20	20	144	< 1	2	8
109583	205	272	65	< 0.5	1	139	0.28	15	360	1	2	10
109584	205	272	80	< 0.5	1	131	0.54	15	260	1	4	8
109585	205	272	90	< 0.5	1	52	0.23	15	370	< 1	2	4
109586	205	272	90	< 0.5	1	100	0.41	15	473	1	< 2	6
109587	205	272	65	< 0.5	< 1	81	0.28	20	242	1	2	6
109588	205	272	85	< 0.5	5	164	1.47	25	146	2	12	8

CERTIFICATION : _____

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 30-MAY-90
Invoice No. : I-9015832
P.O. Number :

CERTIFICATE OF ANALYSIS A9015832

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
109589	205 272	145	< 0.5	1	80	0.36	10	250	1	2	6
109590	205 272	110	< 0.5	< 1	515	0.43	20	167	1	8	10
109591	205 272	40	< 0.5	< 1	51	0.34	10	71	1	2	4
109592	205 272	65	< 0.5	< 1	72	0.32	40	157	61	2	10
109593	205 272	150	< 0.5	4	395	1.62	15	177	1	4	8
109594	205 272	125	< 0.5	7	1255	2.56	10	77	2	< 2	10
109595	205 272	60	< 0.5	< 1	58	0.46	15	219	1	2	6
109596	205 272	105	< 0.5	< 1	110	0.65	35	265	1	4	6
109597	205 272	60	< 0.5	< 1	110	0.23	10	375	1	< 2	6
109598	205 272	120	< 0.5	1	382	0.87	15	356	5	22	10
109599	205 272	180	< 0.5	10	535	3.77	10	79	3	10	10
109600	205 272	150	< 0.5	7	190	2.14	20	215	2	6	8
109601	205 272	200	< 0.5	2	107	1.86	20	160	1	6	8
109602	205 272	135	< 0.5	3	154	1.89	15	108	2	2	8
109603	205 272	120	< 0.5	4	615	1.74	5	121	1	2	8
109604	205 272	130	< 0.5	12	293	2.81	5	26	4	2	4
109605	205 272	205	< 0.5	2	189	2.17	15	199	1	8	8
109606	205 272	210	< 0.5	< 1	118	1.47	15	132	1	1020	6
109607	205 272	130	< 0.5	2	549	0.99	25	367	2	4	12
109608	205 272	265	< 0.5	4	3810	1.31	25	130	2	4	20
109609	205 272	620	2.0	4	>10000	2.18	20	46	2	2	90
109610	205 272	480	< 0.5	21	5000	4.21	15	166	4	2	24
109611	205 272	235	< 0.5	9	1355	3.27	20	105	9	2	14

780'

19608

CERTIFICATION : _____

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project: EXPO
Comments: ATTN: PETER DASLER

Invoice Date: 31-MAY-90
Invoice No. : I-9015934
P.O. Number : NONE

CERTIFICATE OF ANALYSIS A9015934

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	V ppm	Zn ppm
109612	205	272	125	13	381	4.52	30	51	2	4	8	12
109613	205	272	140	13	983	3.65	35	71	3	4	19	16
109614	205	272	175	0	403	2.31	35	70	4	4	14	12
109615	205	272	165	10	218	2.64	50	119	3	2	7	15
109616	205	272	205	18	593	3.10	20	201	4	4	17	20
109617	205	272	135	9	264	2.37	20	146	2	< 2	9	12
109618	205	272	175	14	443	4.96	15	146	4	< 2	12	20
109619	205	272	145	8	336	5.38	15	159	2	< 2	5	12
109620	205	272	285	35	971	4.30	10	291	3	< 2	2	10
109621	205	272	365	48	1585	9.23	20	130	6	6	7	16
109622	205	272	265	82	6320	11.50	20	65	8	< 2	9	34
109623	205	272	225	38	277	8.78	20	77	6	< 2	4	16
109624	205	272	445	26	1425	12.50	35	93	4	4	22	22
109625	205	272	615	28	3080	11.15	65	131	4	< 2	33	28
109626	205	272	510	36	2120	12.60	35	167	4	4	10	24
109627	205	272	245	30	1245	9.07	40	135	5	2	16	20
109628	205	272	140	12	222	4.28	20	247	3	< 2	9	10
109629	205	272	225	21	2110	7.69	20	216	4	4	18	20
109630	205	272	410	14	2480	10.45	15	101	3	2	27	30
109631	205	272	575	20	3510	7.53	70	48	7	2	55	92
109632	205	272	490	19	2830	8.58	125	47	8	10	125	126
109633	205	272	410	15	2470	8.39	85	40	9	10	148	108
109634	205	272	310	24	3090	7.32	20	58	9	4	58	92
109635	205	272	110	27	1710	8.22	10	99	13	6	18	18
109636	205	272	255	26	2860	6.82	15	78	11	6	48	90
109637	205	272	370	22	3280	6.93	25	37	12	8	73	44
109638	205	272	200	26	2170	6.80	145	56	19	14	81	60
109639	205	272	305	42	3740	6.95	70	206	14	8	100	84
109640	205	272	200	32	2420	5.38	80	88	12	10	117	98
109641	205	272	315	25	3250	3.98	145	144	14	10	119	156
109642	205	272	145	28	2160	4.85	165	95	14	32	139	218
109643	205	272	165	25	1735	6.25	135	54	14	10	149	110
109644	205	272	80	31	1655	4.29	30	133	14	14	58	56
109645	205	272	255	33	1935	4.85	20	80	19	10	44	46
109646	205	272	190	31	2960	5.26	25	216	9	8	44	64
109647	205	272	295	25	3110	3.83	70	387	7	2	75	80
109648	205	272	335	27	2240	4.48	105	238	8	6	74	90
109649	205	272	105	28	1440	4.36	65	76	5	8	72	68
109650	205	272	125	35	1545	4.35	125	77	4	4	90	94

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN:PETER DASLER

Invoice Date: 6-JUN-90
Invoice No. : I-9016116
P.O. Number :

CERTIFICATE OF ANALYSIS A9016116

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
27307	205 272	135	< 0.5	3	48	2.87	10	204	1	12	2
27308	205 272	65	< 0.5	< 1	10	0.21	5	11	1	10	< 2
27309	205 272	110	< 0.5	< 1	6	0.53	< 5	41	< 1	8	< 2
27310	205 272	120	< 0.5	3	29	3.86	5	109	1	12	< 2
27311	205 272	125	< 0.5	22	496	6.64	5	86	8	54	42
27312	205 272	365	< 0.5	14	441	4.85	5	55	4	36	40
27313	205 272	165	< 0.5	16	107	4.77	5	29	3	8	8
27314	205 272	105	< 0.5	16	433	7.27	5	91	12	16	6
27315 174	205 272	100	< 0.5	31	564	7.81	15	67	19	18	18
27316 174	205 272	130	< 0.5	3	42	1.36	5	24	1	20	< 2
27317	205 272	165	< 0.5	23	998	5.74	10	34	9	14	504
27318	205 272	140	< 0.5	29	373	6.39	5	17	9	12	132
27319	205 272	180	< 0.5	11	46	4.08	5	26	4	24	30
27320	205 272	200	< 0.5	11	182	3.42	5	37	4	34	20
27321	205 272	130	< 0.5	20	99	5.83	10	93	7	26	22
27322	205 272	180	< 0.5	3	46	2.63	5	166	< 1	60	12
27323	205 272	160	< 0.5	4	65	3.81	10	155	< 1	50	10
27324	205 272	390	0.5	3	98	4.53	5	56	< 1	40	12
27325	205 272	300	< 0.5	23	1355	6.06	5	53	8	6	32
27326	205 272	180	< 0.5	14	1020	4.39	5	45	5	12	24
27327	205 272	365	< 0.5	16	344	4.36	5	61	5	30	26
27328	205 272	395	< 0.5	26	530	6.60	5	72	10	24	32
27329	205 272	150	< 0.5	16	192	4.11	5	73	9	14	16
27330	205 272	195	< 0.5	18	68	5.41	< 5	76	6	18	18
27331	205 272	265	< 0.5	23	361	7.30	5	63	8	22	32
27332	205 272	390	0.5	37	1410	8.51	25	54	18	26	96
27333	205 272	285	< 0.5	30	934	8.71	10	72	13	22	54
27334	205 272	100	< 0.5	1	53	1.31	15	195	1	66	8
27335	205 272	315	< 0.5	5	147	6.02	5	146	< 1	18	12
27336	205 272	360	3.5	12	250	7.55	5	163	3	16	18
27337	205 272	220	< 0.5	30	987	7.55	< 5	175	37	22	38
27338	205 272	240	< 0.5	27	850	7.58	5	87	22	22	44
27339	205 272	335	< 0.5	36	1365	5.96	10	81	11	12	54
27340	205 272	200	< 0.5	32	680	6.85	15	313	8	< 2	192
27341	205 272	175	< 0.5	24	1145	4.74	5	112	8	2	208
27342	205 272	250	< 0.5	26	1110	5.25	5	94	8	4	142
27343	205 272	360	< 0.5	41	864	7.33	< 5	171	23	10	32
27344	205 272	245	< 0.5	32	603	4.82	20	123	32	4	218
27345	205 272	255	< 0.5	18	743	6.10	5	81	15	4	40
27346	205 272	210	< 0.5	13	493	5.29	< 5	70	5	8	16

CERTIFICATION : _____

Chemex Labs Ltd.

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

To: DAIWAN ENGINEERING LTD.
ATTN: PETER DASLER
1030 - 609 GRANVILLE ST.
VANCOUVER, BC
V7Y 1G5

Project : EXPO
Comments: ATTN:PETER DASLER

Invoice Date: 6-JUN-90
Invoice No. : I-9016116
P.O. Number :

CERTIFICATE OF ANALYSIS A9016116

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
27348	205	272	570	< 0.5	19	488	13.20	5	156	4	16	20
27349	205	272	560	< 0.5	13	400	14.70	5	118	< 1	2	22
27350 1750 130m.	205	272	500	< 0.5	32	2640	7.74	5	210	9	6	34
109651	205	272	535	< 0.5	30	2870	5.77	< 5	281	8	8	28
109652	205	272	415	< 0.5	26	3070	6.84	5	227	10	< 2	26

CERTIFICATION : _____

APPENDIX 3

DRILL LOGS

HOLE NO.: EC-154
COLLAR ELEV.: 2241
COORDINATES: 243,649 N. ~~233,475~~ E. 233555
INCLINATION: -90°
GROUND ELEV.:
BEARING:

PROJECT: Expo
DATE STARTED: April 27, 1990
DATE FINISHED: May 2, 1990
TOTAL DEPTH: 452.93 m

PAGE NO.: 1 OF 16
REF. TO CLAIM CORNER:
SCALE: 1" = 2 metres
LOGGED BY: D. PAWLIUK

COMMENTS: EC-154 deepened.

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
264 m							0.00 - 264.57 SEE LOG FOR EC-154		264.57					
							264.57 - 264.68 ANDESITE. Light greyish green, with off-white feldspar (+zeolite?) vlts; moderately brecciated. Probable cave cored during re-entry of old hole.			74		265.71		
266					py		264.68 - 265.71 MUD & CLAY		266.40					
							265.71 - 284.38 PYROPHYLLITE TUFF Light greyish brown to light grey, generally fine grained with larger clasts averaging around 2 mm across. Local faint banding throughout. Occ. grey quartz vlts up to 6mm wide. Occ. py vlts throughout; these vlts brown, composed of v. fine grained pyrite. Occ. pyrophyllite breccia bands with tuff interval, often weakly silicified.	2				#142992		<.1
								4						
268								2				267.81		.1
				M	py		(265.71 - 269.70) Weak clay mineral alteration.	7	269.44		NQ	269.70		
270					cp bn py	?	(264.57 - 266.40) Ground core? 74% recovery; probably discrepancy between old + new measurements of hole depth. Old hole EC-154 probably drilled to 265.71 m depth.	2				#142994		.1
							(266.17) Quartz (90%) - py (10%) vlt 6 mm wide at 37°.							
272							(267.53 - 267.80) Pyrophyllite bx at 30°. 4% py.		272.49			272.70		
					py		(269.22 - 269.70) " " . 7% py.							
					cp		(269.58 - 269.90) Moderately broken core.							
							(270.27) Quartz (60%) py (26%) cp (15%) bn? (5%) vlt 6 mm wide at 59°. Cp overall about 3% over 2 cm core length							
274					py		(273.64) Diss cp traces over 1 cm.	2						.1
							(275.07 - 275.22) Bx with py-quartz matrix; 15% py. Clasts to 7 mm across.	15	275.54			275.76		
276								3						

HOLE NO.: | PROJECT: | PAGE NO.: 2 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: 1.84 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
276							(278.26) 3% cp, traces bn over 5 cm as irregular masses.		3						
							(278.47) Traces diss cp at 72°								
					py		(280.35 - 280.50) Breccia with 10% py within matrix. Band of about 90% py within bx from 280.37 - 280.42 at 60° to c.a.								<.1
278										278.59					
					cp bn		(280.62) Brownish grey quartz vein 5 mm wide at 49° with py along margins.						278.70		
							(281.78) Dark grey quartz vlt 1 mm at about 15° to c.a.; 0.5% cp ∧ diss along vlt.								
280					py				20						.1
							(282.01 - 282.76) 0.5 to 1% combined cp, bn along irregular vlts and diss								
							(282.47 - 284.38) Mottled appearance due to patchy grey silica alteration.		3	281.79		10	281.79		
282					cp py cp bn		284.38 - 284.68 FAULT. Pale grey, moderately broken core and mud. Intense clay mineral alteration. Fault orientation difficult to measure; say 70° to c.a.								0.2
		W					284.68 - 286.52 PYROPHYLLITE TUFF As for 265.71 - 284.38.								
		W			py		(284.68 - 285.27) Bleached; about 5% clay mineral alteration.						284.38		
284							(284.68 - 286.97) Ground core; 80% recovery.								
				I			286.52 - 286.97 FAULT. Brecciated pyrophyllite tuff. Finely to moderately broken core and pale grey mud seams up to 8 cm wide along fracture stc at 74°.			284.69					<.1
286							286.97 - 306.36 PYROPHYLLITE? TUFF. Mainly light grey; local light brown-grey sections. Fine grained, more massive than overlying tuff intervals. More abundant breccia intervals than overlying units; slightly harder, more silicified			286.97			287.38		
				I	bn										
288					py										

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 3 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
288				W			(287.06) 1% bn near margins of off white feldspar-zeolite vlt (286.97 – 287.38) Moderately brecciated. Occ. vlts waxy reddish-grey mineral (pyrophyllite?) to 10% rock volume.		3						<.1
				M			(288.26 – 291.15) Weakly to moderately brecciated. Pyrite more clustered rather than evenly distributed throughout rock.								
290		M		M	py		(288.26) Grey quartz vlt / 15 mm wide at 33°. off-white to very pale brown feldspar as breccia matrix.		5	290.02			290.38		<.1
				W			(289.62 – 289.76) 15% py as irregular bands; (290.65 – 291.14) 10% py as irregular bands at about 30° and disseminated 30% white to creamy brown, brecciated feldspar-zeolite(?) vlts; 10% smokey grey vein quartz.		1-2						
292							(292.64 – 293.27) 5% white feldspar as vlts at about 45° and also spotted throughout. Feldspar vlt crosscut by pale grey quartz vlt.			293.07			293.38		
294		W		W											<.1
296							(297.74) Pale grey quartz vlt 3 mm wide at 12° rimmed by pyrite and pale brown pyrophyllite?			296.27			296.30		
					py		contains 1 speck cp.								
		M			cp py										
298										297.48					<.1
													299.38		
300															

HOLE NO.: A--154 | PROJECT: | PAGE NO.: 4 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
300							Contacts at 70°. Possible healed fault.								
					py		(300.03 - 300.13) Breccia. Clasts of light brownish grey pyrophyllite tuff in off-white to pale grey feldspathic matrix. Py disseminated as in adjacent tuff		1	300.53					
		W		M			(300.66 - 301.15) 50% off-white to pale brown feldspar, 45% tuff, 5% vein quartz. Moderately brx. Wispy py veins crosscut both vein feldspar and quartz. Upper margin of interval discrete at 73°.								<.1
302															
		W		M	py								302.30		
				W	py		(302.35 - 302.89) As above but more abundant pale brown, fine grained feldspathic material - this could be recemented fault gouge material - looks like an arkose and forms the breccia matrix. Local lensoid py bands to 5% over few cm.			303.58				<.1
304												C			
							(302.89 - 303.53) White feldspar spots to 6 mm across. 3%					N			
							(305.79) Veinlet of 40% py, 60% fractured (py along fractures) off-white feldspar 10 mm wide at 25°.						305.38		
306									2						
	W	W		W	py		306.36 - 309.92 PYROPHYLLITE BRECCIA. Light brownish grey; pyrophyllite-rich matrix, mottled appearance. Weakly silicified. Clasts most distinct within 30 cm of contacts with adjacent tuff; clasts generally have faint boundaries within central portion of unit. Lower contact at 26°.			306.63				
	W	W							3						<.1
308	W	W													
	W	W											308.38		
	W	W					309.92 - 369.78 PYROPHYLLITE TUFF Light grey to light brownish grey, fine grained, generally as for 306.97 - 306.36. 1% off-white kaolinite (feldspar?) faint spots up to 3 mm across throughout.								
310		W							1-2	309.68					<.1
					py		(311.60) Crude veinlet about 8 mm wide at 40°; 85% grey quartz, 15% pyrite as lensoid bands.						311.38		
312															

HOLE NO.: -154 | PROJECT: | PAGE NO.: 5 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: pyrophyllite	ALTERATION: Silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
312		W			py		(313.76) Py-rich (40%) band 31 mm wide at 70°.		1						
							(316.87) Pale grey quartz (80%) py (20%) vein 13 mm wide at 40°; possible cp traces.			312.72					<.1
314							(317.44 – 317.54) Moderately broken core.						314.38		
							(317.54 – 317.85) Pale pinkish brown, very fine grained, pyrophyllite-rich (90%) interval with wispy pyritic (?) laminae, parallel lower contact at 60° to c.a. Possible altered, cemented, healed fault. Py band 6 mm wide along lower contact. Weak pyrophyllite alteration of wallrock for 80 cm above interval, 50 cm below.			315.77					
316					py				1						<.1
					cp.							O			
					py		(321.06) bn (?) traces along py band. Reddish					≥	317.38		
318							(321.38 – 321.78) Pyrophyllite bx. Occasional white feldspar clasts, up to 40 mm across.			318.82					<.1
					py		(324.25 – 324.78) Weak to locally moderate white clay mineral (kaolinite?) alteration.		2						
320													320.38		
					bn (?)				3						
					py										
322										322.17					<.1
													323.38		
324									1						

HOLE NO.: E 154 | PROJECT: | PAGE NO.: 6 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: | N. | E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
324					py		(326.14) Grey quartz (80%) – creamy white feldspar (5%) and pyrite (15%) vein 7 cm wide at 31° to c.a. Quartz then pyrite then feldspar then small amount of py.	1	324.92					<.1
								2				325.88		
326							(328.18 – 331.80) Pyrophyllite bx. More abundant py than in overlying and underlying tuffs. Lower contact at about 26° to c.a.							<.1
		W							327.96			328.00		
328				W	py			4						
				W			(333.80 – 334.32) Weak, pervasive orange feldspar alteration.				NQ			<.1
		W		W			(334.55) Pyrophyllite bx band 15cm wide at 35° with 3% py within matrix.							
330				W										
		W		W			(334.91) Py vlts 2–3 mm wide at 45°. White kaolinite along randomly oriented fracture sfcs throughout this portion of hole.		331.01			331.00		
				W										
332								2						<.1
		W		W										
					py									
334								3	334.86			334.00		
								1						<.1
336														

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 7 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER: 1.02 m / 1.22

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: propylitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
336					Pl		(336.65 - 337.34) 2% white Kaolinite spots to 1 mm across. Coarser grained than usual with sug 5% of clasts at least 3 mm across.		1	336.65			332.00		<.1
							(337.45) Grey qtz vlts 1 mm wide at 15°.								
338							(337.58) Py vlt 1-2 mm wide at 50°.			338.18		NQ			
							(338.08 - 346.04) Weak, pervasive pale orange-brown pyrophyllite alteration.								<.1
	W						(340.46 - 343.40) Moderately broken core								
	W						(340.46 - 341.68) Ground core; 84% recovery.						340.00		
340	W						(345.30 - 346.18) About 10 creamy white, irregular feldspar veinlets up to 3 cm wide usually at about 40° to c.a.			340.46	84				<.1
	W						(346.11 - 346.37) Pale grey, moderately fractured, weakly brecciated quartz vein at 27°. Interval may be intensely silicified tuff.			341.68					
342							(346.37 - 346.67) Breccia. Angular fragments of silicified tuff to 2 cm across within pale brown matrix of pyritic Kaolinite (?). Probable healed fault. Lower contact at 41°			342.29			342.00		
										343.26					
344							(346.67 - 347.23) Moderately silicified, moderately brecciated.								<.1
				W						345.34					
346				M									346.00		
	M	M													
348															

HOLE NO.: EC-154 | PROJECT: Expo | PAGE NO.: 2 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
348		W		W			(349.14 – 349.45) Breccia. Moderately silicied; at 10° to c.a. with bx matrix 20% off-white feldspar.		<1	348.00					
		M				py	(350.08 – 350.57) 5% off-white, irregular feldspar vlts.						349.00		
							(350.48 – 350.53) 10-15% py diss within irregular masses.								<.1
		M		M			(352.06 – 353.33) 5-10% pale orange-brown pervasive pyrophyllite (?) alteration.			349.91					
350													351.35		
							(355.90) Pale grey quartz (90%) – py (10%) vlt 3 mm wide at 15°.								<.1
352										352.65					
							(358.73 – 359.42) Light brown, weakly pyrophyllitized interval.		1						
													354.35		
354															
							(359.80) Py vlts to 2 mm wide at 34°.			354.99					<.1
356													357.00		
										357.53					<.1
358					M										
									2	359.05					
													360.00		
360		W													

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 9 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
360	W				Py		(365.18 – 365.82) Moderately broken core. (367.48) Py band 4 mm wide at 26°.		2	360.57			360		
	W														<.1
362	W						369.78 – 376.23 PYROPHYLLITE BRECCIA. Light greyish brown, generally clasts of fine grained pyrophyllite tuff (80%) and other lithologies (20%). Clasts sometimes with faint boundaries. Clasts mostly subangular, form about 85% of rock; 15% matrix. Matrix more pyritic (diss) than clasts. Weakly pyrophyllitized throughout, local weak clay mineral alteration.			362.56			363		
	W														
364	W			W						364.84		NQ			<.1
				W											
				W					1						
366													366		
										367.28					
368															<.1
										368.81			369		
370										370.94					<.1
372													372		

HOLE NO.: DC-154 | PROJECT: | PAGE NO.: 10 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
372													372		
	W			W	py		(373.92 – 374.28) 1% red garnet (or jasper?) to 3 mm across, diss.								
	W			W			(374.49) Fault. Gouge and finely broken core 6 mm thick on fracture at 32° to c.a.		1	372.71					<.1
374	W			W			(374.75 – 376.12) Moderately broken core.								
	W			W			(376.50) Py as irregular masses.								
	W			W			(377.86 – 379.01) Moderately broken core.			375.21			375.00		
	W			W			(378.50) Py vlts to 2 mm wide at about 80° offset by hairline fractures, some lined with py, subparallel c.a.								
376		W		W			(378.71) Probable fault. Finely broken core and smear of mud on fracture at 41° to c.a.			376.12					<.1
					py		376.23 – 395.94 PYROPHYLLITE TUFF Light brownish grey to light grey to light brown, fine grained, locally faintly banded throughout. Similar to tuffs higher in this hole. Local pyrophyllite bx bands to 30 cm throughout interval.		3						
378									<1				378.00		
	W									378.26					
										379.01					<.1
380					py		(383.39 – 384.00) Moderately broken core. Probable fault at 383.83 where finely broken core on fracture at 27°.			380.85					
							(383.87) Pale grey quartz vlt 5 mm wide at 8° contains py specks.						381.00		
							(384.40 – 384.63) 2% white kaolinite (?) as spots to 3 mm.								<.1
382															
										383.13					
384	W												384.00		

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 11 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silicg	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
384					py		(384.74) Pale grey quartz vlts 4 mm wide at 26° offset by fracture at 20° to c.a.		<1				384		
							(384.92 - 388.32) Moderately broken core.			384.81					<1
							(386.18) Pale greenish grey, wavy, soft mineral forms vlt 6 mm wide at 53°.			385.26					
386				M			(386.51 - 386.90) Breccia; intensely silicified across 7 cm at 386.67.			386.33			387.00		
		W							4						
				W	py		(386.67 - 386.90) Breccia contains about 4% diss py within matrix.			387.40					
388							(387.47 - 388.00) Discontinuous, irregular, randomly oriented watery grey qtz vlts to 4 mm wide form 2% of rock.		<1						
				W						388.32					<1
							(387.95) 2% py as irregular mass and diss.		2						
390				W	py		(391.88 - 393.80) Moderately broken core.		1-2				390.00		
							(393.89 - 394.13) As for 387.47 - 388.00.								
		W		W			(394.81 - 396.53) Moderately broken core.								
392		W								391.36					<1
		W					(395.94) Fault. 4 mm finely broken core and grey mud on fracture at 27°.			392.5			392.00		
		W													
394		W					395.94 - 398.68 PYROPHYLLITE BRECCIA. Greyish brown to brown, clasts of fine grained pyrophyllite tuff (often with faint boundaries) form about 85% of rock.			393.80					<1
		W								395.33					
396				W					2	395.94			396.00		

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 12 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP INT.	ESTIMATED % Cu
396				W			(396.78-396.95) weak, bright yellow clay mineral alteration.		2				396.00		<.1
				M	py		(397.00-398.07) Moderately broken core								
				W			(398.07) Fault. Smear of pale grey mud on fracture at 32°								
398				W			(398.07-398.68) Rock brown, dense; about 10-15% diss py throughout.		10	397.76		N	399.00		
					py		(398.68) Contact with underlying unit discrete at 52°.		3						
400				W			398.68-399.86 DYKE(?) Medium greenish brown to dark brownish green very fine grained to aphanitic, locally porphyritic with lath-shaped feldspar phenos to 3 mm. About 3% py diss and along fractures. Odd rock; may be a more mafic (chlorite)-rich band of pyrophyllite tuff. Approx. andesite composition.		1	400.96			402.00		<.1
402		?I					(399.61) Probable fault. 2 mm light grey mud on fracture at 40° to c.a.								
							399.68-401.61 PYROPHYLLITE TUFF, weakly brecciated throughout. Contact with underlying unit discrete at 50°.						37.37		<.1
404		?I		W			401.61-404.01 DYKE(?) Medium brown, very fine grained to aphanitic with phenos av. <0.5 mm across. 1% watery grey, randomly oriented quartz vlts. Odd rock; may be intensely ?pyrophyllitized (brown colour) tuff. Fault contact with underlying unit at 42°			404.01			405.00		
		W	W	W											
				M											
406							404.01-431.15 PYROPHYLLITE TUFF Brownish grey to light grey to pale brown, fine grained, local breccia bands throughout.		2	406.91					<.1
					py		(404.51) 5% py as irregular masses over 2 cm.								
408							(406.59) Fault, 18 mm of pale grey mud and finely broken core on fracture at 55° to c.a.						408.00		
							(406.45) BAND 30% py at 35° to c.a. 6cm wide.								

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 13 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
408				M	py		Fault zone. (412.52 – 430.02) Rock generally medium grey, moderately to locally intensely fractured throughout with abundant faults, at intervals of about 50 to 200 cm. ~~moderately broken core and mud~~		2	408.09			408		<.1
410										410.26			411.00		
412							Faults marked by finely to moderately broken core and mud along fractures at 23° at 412.85, 50° at 413.77, about 65° at 414.37, 46° at 416.44, 27° at 418.93, 35° at 419.97, 26° at 421.56, 50° at 424.06, about 75° at 424.77, 38° at 425.15, 48° at 425.42, about 75° at 429.81.		1	413.16					<.1
414							(414.00 – 417.27) Moderately broken core.						414.00		
416										416.05					
418										417.27			417.00		
420													420		

HOLE NO.: 154 | PROJECT: | PAGE NO.: 14 OF 16

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION (Amphibole, Silica, Sericite)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
420		W	py		(423.24) Pale grey quartz vlt 6 mm wide at 36°.		1	420.32			420		<.1
422		I			(428.95) Py 5% over 3 cm. (429.65 - 429.97) Fault. Soft, finely broken core and mud between fractures at about 70° to c.a.			423.37			423		
424		M					2						<.1
		W											
		M			431.15 - 440.03 ANDESITE. Greenish brown to light grey, fine grained, generally massive and porphyritic with dark green (hornblende) and off-white (feldspar) phenocrysts from 1 to 3 mm. Weakly fractured throughout, most fractures from 45° to 75° to c.a. Possible flow.			426.41			426		
426		I											<.1
		W											
		W											
		M			(432.16 - 435.63) Weakly brecciated. Py as irregular masses up to 8 by 20 mm across between breccia fragments.			428.85			429		
428		W											
		I			(433.49 - 435.44) Off-white to pale grey, soft, somewhat granular mineral (not calcite) forms 1% of rock volume as irregular veinlets with py between breccia fragments.		1						<.1
430		py											
		W											
	W	W						431.90			432		
432		W											

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 15 OF 16

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
432				W			(435.58) Fault. 22 mm of grey mud and finely broken core between fractures at 55° to c.a.	1				432		
434				W			(437.08) Fault. 12 mm of mud and finely broken core at about 40° to c.a.							<.1
				M					434.94			435		
436														<.1
				M			440.03-442.73 BASALT Dark greenish grey, very fine to fine grained, massive, weakly fractured throughout with Contact with overlying unit at 17°.							
438				M					437.99		N	438		
							1% pale green epidote as wispy, hairline vlts along fractures.							<.1
440							(440.57) Salmon orange zeolite vlt 6 mm wide; orientation cannot be determine because core broken.							
							(440.38-441.04) Moderately broken core.		441.04			441		
442							442.73-452.93 ANDESITE. Brown to greenish brown to light grey, fine grained, massive. Brown colour likely due to pervasive, weak pyrophyllitization. Contact with overlying unit fault at about 55°.							<.1
		W		W				2						
444				M				<1	443.78			444		

HOLE NO.: EC-154 | PROJECT: | PAGE NO.: 16 OF 16

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: tourmaline	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
444													444		
				W	py		2% vlts of soft, pale grey, watery coloured mineral to 4 mm wide throughout. Vlts randomly oriented, often irregular.		<1						<.1
446				M			(443.80) Fault. Mud and finely broken core 8 mm thick at fracture at 55° to c.a.								
							(447.39-447.56) Fault. Soft, intensely fractured core. Fractures at about 35°.			446.83			447		
448				I			(448.96-449.41) Breccia. Subround to angular clasts of various lithologies up to 4.5 cm across. Upper contact discrete at 58°; lower discrete and irregular at about 50°.								<.1
450							1% finely diss py within matrix and clasts.						450		
					py		(451.17-451.70) 5% vlts of soft, pale watery grey mineral to 6 mm wide subparallel c.a.			449.80			#33153		<.1
452				M			452.93 END OF HOLE								
										452.93			452.93		

Drill Core Data From Hole EC-154

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
265.71	267.81	142992	1230	44	130	< 0.5
267.81	269.7	142993	1040	36	145	< 0.5
269.7	272.7	142994	1100	36	135	< 0.5
272.7	275.7	142995	854	44	135	< 0.5
275.7	278.7	142996	2190	27	175	< 0.5
278.7	281.7	142997	745	17	185	< 0.5
281.7	284.38	142998	1580	15	75	< 0.5
284.38	287.38	142999	412	15	50	< 0.5
287.38	290.38	143000	489	56	260	< 0.5
290.38	293.38	33101	803	19	245	< 0.5
293.38	296.38	33102	198	108	70	< 0.5
296.38	299.38	33103	403	155	100	< 0.5
299.38	302.38	33104	112	128	50	< 0.5
302.38	305.38	33105	190	112	90	< 0.5
305.38	308.38	33106	144	61	70	< 0.5
308.38	311.38	33107	247	39	55	< 0.5
311.38	314.38	33108	156	47	110	< 0.5
314.38	317.38	33109	131	26	60	< 0.5
317.38	320.38	33110	228	14	85	< 0.5
320.38	323.38	33111	255	11	90	< 0.5
323.38	325.88	33112	87	6	60	< 0.5
325.88	328	33113	109	33	85	< 0.5
328	331	Z-2	100	20		
331	334	33114	100	14	65	< 0.5
334	337	33115	60	8	45	< 0.5
337	340	33116	58	16	50	< 0.5
340	343	33117	161	3	45	< 0.5
343	346	33118	67	5	40	< 0.5
346	349	33119	57	13	25	< 0.5
349	351.35	33120	45	8	15	< 0.5
351.35	354.35	Z-1	300	40		
354.35	357	33121	76	2	25	< 0.5
357	360	33122	45	2	25	< 0.5
360	363	33123	51	1	55	< 0.5
363	366	33124	50	1	35	< 0.5
366	369	33125	56	3	40	< 0.5
369	372	33126	125	1	25	< 0.5
372	375	33127	107	1	25	< 0.5
375	378	33128	82	2	25	< 0.5
378	381	33129	140	7	50	< 0.5
381	384	33130	167	1	40	< 0.5
384	387	33131	308	8	45	< 0.5
387	390	33132	104	1	20	< 0.5
390	393	33133	98	1	10	< 0.5
393	396	33134	189	1	35	< 0.5
396	399	33135	256	5	30	< 0.5
399	402	33136	61	1	20	< 0.5
402	405	33137	35	1	10	< 0.5
405	408	33138	221	1	25	< 0.5
408	411	33139	116	1	5	< 0.5
411	414	33140	153	3	15	< 0.5
414	417	33141	49	1	10	< 0.5
417	420	33142	54	1	15	< 0.5
420	423	33143	15	7	5	< 0.5
423	426	33144	15	17	10	< 0.5

Drill Core Data From Hole EC-154

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
426	429	33145	13	29	5	< 0.5
429	432	33146	94	4	10	< 0.5
432	435	33147	16	2	10	< 0.5
435	438	33148	50	3	5	< 0.5
438	441	33149	29	1	5	< 0.5
441	444	33150	63	2	10	< 0.5
444	447	33151	40	1	10	< 0.5
447	450	33152	123	3	15	< 0.5
450	452.93	33153	29	1	5	< 0.5

HOLE NO.: EC 171 | PROJECT: EXPO | PAGE NO.: 1 OF 25

COLLAR ELEV.: 1185' 25' | GROUND ELEV.: | DATE STARTED: APRIL 18 /90 | REF. TO CLAIM CORNER:

COORDINATES: 246,518 N. 232,820 E. | DATE FINISHED: APRIL 22/90 | SCALE: 1" = 2m

INCLINATION: -90° | BEARING: — | TOTAL DEPTH: 290.77 m | LOGGED BY: D. PAWLIUK

COMMENTS: S = slight M = moderate I = intense c.a. = core axis

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Propylitic	Pyrophyllite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
0.0								0.0 - 0.2 m Casing Stickup							
								0.2 - 6.71 CASING OVERBURDEN							
2.0								(6.71 - 12.22) ANDESITE TUFF light brownish grey to green to dark green. light brownish grey intervals have been mod. to intensely pyrophyllitized. Fragments av 1-2 mm in chlorite-rich matrix. Maroon Magnetite up to 3% locally.							
4.0			i					(7.07 - 7.47) light tan interval with intense to moderate clay mineral alteration. Brown, py rich, irreg-bands from 5 to 30 mm wide at about 40° to c.a.							
								(7.16) Qtz vlt. 1mm wide at 42° to c.a.							
								(7.25) light grey qtz vlt 4mm wide at about 20°							
6.0								(7.28 - 7.36) Soft, finely broken core; possible fault							
								(8.06 - 8.10) light grey mud and finely broken core. Probable fault, orientation cannot be measured.							
						Py		(8.10 - 10.83) light brownish grey, moderately pyroph. moderate clay mineral alteration, py diss and diss along fractures at 28° to 48°	1-2/8	6.71		NX CASING	6.71		<0.1
8.0	S		m						2						
	S		m		m			(9.52) Slickensides on fracture at 54° to c.a.					8.71		0.1
								(9.70) Cp (?)							
				S		Py		(10.72) Py, cp along fracture surfaces				NQ			
10.0			m			(cp?)									
	S					Py		(10.83 - 12.22) Mod. to locally intensely brecciated; local 5% magnetite, 1% chlorite tr. hem in matrix surrounding andesite tuff clasts which are up to 5 cm. across. 3% diss py.		10.36			10.83		
11.0		m				Cp			3						0.1

HOLE NO.: 1 | PROJECT: | PAGE NO.: 2 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: | AVE CORE REC'Y / HOLE

SECTION	ALTERATION: PROPYLITIC	PYROPHYLITE	SILICA	SERICITE	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
12	S				M	py		12.22 – 14.53 ANDESITE AGGLOMERATE. Medium green to bright green, medium grained with clasts av. 1-2 mm, max 15 mm, of various lithologies. Similar to overlying rock. Mod. chloritized.	1%				12.53		
13					M	mag		(12.22) Contact with overlying breccia at about 15° to c.a. (12.81-13.11) Mod. to finely broken core. (13.50-14.53) " " " " " . Possible fault from 14.11 – 14.18		13.11					<0.1
14					M	mag		14.53 – 19.51 PYROPHYLLITE BRECCIA. Light brown-grey to pale grey. Local weak to moderately silicified. Kaolinite 3 to 40%, along fractures and as pervasive alteration product. Local 3-5% bright green chlorite within altered mafic minerals. Py diss throughout, and as abundant, irregular, discontinuous vlts below 17.84. Contact with overlying unit probable fault at about 30° to c.a. Matrix pyroph. and prob. silica. Angular clasts to 5 cm across.		14.33			14.53		
15	M	M	S	S	I	py									0.1
					M	py									
16								(15.40-15.73) Fault. Finely broken core and mud along fracture at 31° to c.a.					16.53		
					M	py		(19.18-19.51) Fault; finely broken core and mud; abundant kaolinite.	3	16.76					0.1
18						py		19.51 – 19.90 ANDESITE TUFF As for 6.71 – 12.22 but moderate to intense clay mineral alteration. Abundant chlorite 19.51 – 19.69.				NQ	18.53		
						cp(?)		19.90 – 22.86 PYROPHYLLITE BRECCIA. Light brownish grey, 3-4% diss py. Clasts to 3 cm. Not as much pyroph. as from 14.53-19.51. Moderately abundant cream coloured clay mineral below 22.40. About 10% Kaolinite below 20.20	6	14.53-19.51					0.2
19					M I				4	19.51					
									1						
20		M	c			py		(19.90-19.96) Possible fault. Soft, broken core and mud. (20.70-21.03) Probable fault. Soft, finely broken core and mud. (21.80-21.93) As above.					20.53		
					M				3	21.03			#142858		0.1
22								22.86 – 24.87 ANDESITE TUFF. Dark greenish maroon colour; abundant (10-20% locally) magnetite. Mafics moderately altered to chlorite.							
23								(23.23-23.85) Light grey-green andesite breccia.					22.86		
						mag			1	22.86					
									3						

HOLE NO.: 1 | PROJECT: | PAGE NO.: 3 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Propyllite	Pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
								DESCRIPTIVE GEOLOGY								

(24.17) Quartz (93%) cp (5%) py (2%) v/t 3 mm wide at 36° to c.a.

24.87 – 37.17 PYROPHYLLITE BX. Light brown grey to light greenish brown with pyrophyllite matrix containing subrounded to angular clasts av 2–6 mm across, up to about 40 mm across. Unit contains fewer clasts and is less silicified than pyroph. bx higher in this hole. Fault contact with overlying andesite tuff.

(24.87 – 25.78) Fault. Interval 70% pale grey mud, 30% soft, finely to moderately broken core. Cannot measure orientation.

(25.97) 10% finely diss. py.

(27.88 – 32.16) Moderately broken core.

(28.49 – 28.65) Fault. Pale grey, sticky mud and finely broken core.

(29.16 – 29.75) Orange limonite and white kaolinite coat fracture surfaces

(31.10) cp and py as wispy veinlets and diss within irregular bands at about 40° to c.a.

(32.61 – 35.42) 1% orange-brown limonite and traces white Kaolinite along fractural surfaces.

(33.80 – 33.94) off-white to pale grey, waxy, soft mineral similar in appearance to quartz (? name) occurs in few irregular v/ts at about 40° to c.a.

(35.58 – 35.80) Fault. Finely broken core and mud.

24.38	2
26.52	
28.65	
30.18	3
32.16	1
35.36	

24.87	1.
26.87	
28.87	
30.87	
32.87	
34.87	

NQ

HOLE NO.: 4 | PROJECT: Expo | PAGE NO.: 4 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: propyllitic	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
36		M						37.17-50.69 ANDESITE TUFF Light brownish green to maroon to green, generally fine grained. Pyrophyllite, chlorite throughout. Kaolinite common, cream coloured clay. Magnetite occurs as subround to subangular blebs up to 6 mm across and, occasionally, as veinlets to 2 mm wide with cp and py. Specks of hematite within magnetite-rich intervals, with 1 to 3% py. local traces diss cp. Magnetite-rich (75%) from 39.65-39.75, 41.98-43.04, 44.11-44.60, 47.75-47.88.	1				37.17		
38		M				py			3	38.40					0.3
		S				cp							39.17		
						mag									
40						py									0.2
								38.05-38.28 Py, cp vlts 30° to 70° to c.a.		41.45		NQ			
								38.45 Py, cp vlt at 62° to c.a., 1 mm wide.					41.17		
								38.57 As above at 56°.							
								39.00 As above at 17°, 3 mm wide	2						
42		S				py		41.88 As above at 35°, 2 " "							0.4
						cp		44.68-47.93, More chlorite and less clay mineral alteration than 48.72-50.69 within upper part of interval.	1				43.17		
						mag		42.22 Cp, hem vlt 1 mm wide at 20° to c.a.							
44		S				mag		42.49 " " " 1.5 " " 21° " "		44.50					0.2
						cp		43.16 Limonite lining fracture at 36°.							
						py		45.36 " " " " 27.							
								46.18 Magnetite, cp, py, hem vlt 1-2 mm wide at 18°					45.17		
46		S						46.98-47.19 Py 5%, cp traces within wispy bands about 50°, mag to c.a. and diss.							0.2
						cp		47.61 py vlt 1.5 mm wide at 60° to c.a.							
						mag		47.52-47.63 Py 6%, traces cp.					47.17	154.75	
48		M				py		48.37-48.74 Py 5% diss. White Kaolinite on fracture sfcs	4	47.55					0.3

HOLE NO.: 1 | PROJECT: Expo | PAGE NO.: 5 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: propyllitic	pyrophyllitic	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
48						py		49.67 Traces cp within hairline py vlts.		4						0.1
								50.69-51.34 PYROPHYLLITE BRECCIA Light grey-brown red. grained, 2 generations of py vlts at about 40° to c.a. at 51.14. Irregular hairline py vlts throughout.		1	49.68			49.17		
50								51.34-54.27 ANDESITE TUFF Generally as for 37.17-50.69 but more clay mineral alteration (weak to moderate throughout) locally slightly silicified & locally minor pyrophyllite. Discrete contact with underlying unit at 38°.		3				50.69		0.2
		M	S			py cp(?)		(52.30-52.63) Possible fault. Moderately broken core with smears of mud on fracture sfcs.		2						
52								(52.69) Py vlts at about 40° to c.a.			51.82			52.27		0.2
								(52.92) Fault. Slickensides on fracture sfc at 55°. and 2 mm grey mud								
						mag py		(53.29-53.46) 10-15% mag. AGGLOMERATE — TUFF.			53.19					0.1
54								54.27-63.87 PYROPHYLLITE Light brown-grey, moderate pyrophyllitization throughout, weak clay mineral alteration, locally weakly to moderately silicified. This unit appears to be the andesite tuff which has undergone alteration. The green pyrophyllite agglomerate-tuff contains only local minor chlorite, which is abundant within the andesite tuff intervals. Py diss throughout and as wispy vlts.					NO	54.27		
											55.76					0.1
56				S	py									56.27		
					cp(?)			(55.57) watery quartz vlt 2 mm wide at 83° to c.a.			56.69					
								(57.56) 3% cp, trace hem, 2% py diss. Cp as mass about 4 by 15 mm across.								0.3
					py cp			(58.10) Py-rich band 15 mm wide at 30°		3				58.27		
58										1						
											59.18					0.1
60																

HOLE NO.: 1 | PROJECT: | PAGE NO.: 6 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. - E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
60							(61.62) Py v/t 1mm wide at 26°. (62.46-62.61) 1-2% cp as irregular masses along fracture. (62.42-63.14) Moderately silified + fractured.		1				60.27		0.1
									2						
62					py		63.87-65.69 ANDESITE TUFF As for 51.34-54.27 with occ. pale grey quartz veinlets.			6218			6227		
		M		M	cp										
					py		65.69-67.12 PYROPHYLLITE BRECCIA. As for bx higher in hole except here more abundant py and cp diss within matrix (66.78-67.12) 2-5% cp diss and irregular wispy masses.		3						0.4
64									2	6370			6427		
															0.6
					cp		67.12-68.26 ANDESITE TUFF As for 63.87-65.69.		4						
66					py		68.26-70.77 PYROPHYLLITE TUFF As for 54.27-63.87 (70.52-70.77) Mod. fractured grey quartz vein at 20° to c.a. contains 1-2% py as hairline to 1 mm v/ts.			6614		NQ	6627		
					cp										
					py										0.3
									2						
68					py					6812			6827		
		S			mag		70.77-77.38 ANDESITE TUFF. Greenish grey, generally fine grained. Abundant chlorite. Local weak to moderate clay mineral alteration. Pale grey quartz v/ts common throughout.								
70		S		S									7027		
		M					(71.07-71.39) Mod. yellow clay mineral alteration.			7117					
				S			(71.95) Quartz-py v/ts to 4 mm. from 40° to 70°.		1						
72															

HOLE NO.: 1 | PROJECT: | PAGE NO.: 7 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: Pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
72		S					70.37 - 77.38 ANDS TUFF (cont.) (72.51 - 76.00) 2 to 5% magnetite (73.57 - 73.69) Mod. clay mineral alteration. (74.58 - 74.80) Fault. Breccia between fractures at 22° to c.a. contains 3% diss py.		1	7315			7227		0.1
74		S			mag py		(75.08) 2% pale orange-pink zeolite (?) masses to few mm across, traces cp.		2	7529			7427		
		S		M	cp		(75.61 - 75.78) Fault. Mud and soft, intensely fractured core between fractures at 53° to c.a.; slickensides on fracture surface.								0.2
76		S	M S	I	cp		(76.50 - 77.42) Ground core; 57% recovery. Core moderately broken. (76.10 - 76.33) 0.5 - 1% cp, plts within mod. silicified interval.			7650			7738		
				I					3	7742					0.1
78					py cp py cp		77.38 - 81.40 PYROPHYLLITE BRECCIA Pale grey-brown to creamy brown. Finer grained than breccia in topmost part of hole; here clasts av. ~1/5 mm across to max 21 mm. Local weak silicification. Sulphides diss + as wispy vlts and more abundant clasts vs matrix.						7938		0.3
80				I	py		(77.38 - 79.38) Weak to local mod. clay mineral alteration. (77.38 - 77.71) Fault. Intensely brecciated with abund. white clay lining fractures & cs. Clay + finely broken core from 77.38 - 77.47.			8047			8138		
				M					2						
82				M			(80.47 - 80.08) Fault. Finely broken core + mud, 20 mm thick between fractures at 18 to 28° to								0.2
				M	py		81.40 - 82.57 ANDESITE TUFF. 5 - 8% magnetite, grey quartz vlts. (82.21 - 82.30) Fault. Mud and broken core at 30°.			8230					
							82.57 - 84.43 Pyrophyllite breccia Clasts av. ~3mm, coarser grained than from 77.38 - 81.40 Contact with underlying unit at 44°		3	83.27					

HOLE NO.: 1 | PROJECT: | PAGE NO.: 8 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
84					py		(82.30 - 83.27) Ground core; 85% recovery. 84.43 - 85.75 ANDESITE TUFF As for 81.40 - 82.57. Local white clay mineral alteration along margins of fine quartz-py vlts. ~6% grey qtz vlts.		3				84.43		
							85.75 - 91.92 PYROPHYLLITE ALTERED TUFF. Light grey - brown, medium grained with occ. clasts to 6 or 8 mm across. Appears to be andesite tuff which has undergone moderate to intense pyrophyllite alteration. 3% grey qtz vlts.		2						0.1
86	M				py (p)					86.26			86.43		
	M						(86.12 - 86.24) Fault. Off-white mud and broken core on fracture at 48° to c.a.; slickensides.		6						0.2
	I				py		(90.25 - 90.43) Fault. Pale grey mud and finely broken core between fractures at 40°.								
88	M						91.92 - 94.64 PYROPHYLLITE BRECCIA. Light brownish grey; abund. large (av. ~7mm) clasts form about 85% rock volume. Contact with overlying unit discrete at 27°. Occ. py vlts to 2.5 mm at 35-60° to c.a.		3	88.39			88.43		0.2
	M			M	py										
	I				cp (?)										
	M				py										
90	M						94.64 - 104.76 ANDESITE TUFF Greyish brown to maroon to green, fine to med. grained. Rock has undergone weak to moderate pyrophyllite alteration; less altered than 85.75 - 91.92 interval. 3 to locally 10% grey quartz veinlets throughout mainly at about 40° to c.a. Maroon, magnetite-rich (5-15%) intervals from 95.70 - 95.78, 97.14 - 97.27, 97.82 - 98.33, 98.87 - 99.09, 100.67 - 101.49, 102.75 - 103.40, 104.47 - 104.68. Contact with underlying breccia discrete at about 36° to c.a. Local weak chlorite alteration of mafic minerals.			90.83			90.23		
				M					3						0.2
92	W				py								92.23		
									2						
	M				py					93.57					0.1
94	M														
	W				py								94.64		0.1
	M														

HOLE NO.: 1 | PROJECT: | PAGE NO.: 9 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
96	W	M		W	py		(99.29 - 99.58) Grey quartz vein at 25° contains 2% py as irregular vlts and masses.								0.1
	M						(100.20 - 100.55) Grey quartz vein at 27° with 2% py diss and as hairline vinlets. Intense white feldspar? (hardness 4) alteration over 35 cm along topmost vein margin		2	9662			9664		
98					mag										0.1
	W						(101.82 - 101.93) Grey quartz veins at 43° with diss py, sp along margins.						9864		
	M												#142096		
							104.76 - 107.18 PYROPHYLLITE BRECCIA. Light grey to light brownish grey, generally as for 91.92 - 94.64 except about 90% clasts 10% matrix in this interval. Occ. faint py vlts to 4 mm wide. Contact with underlying unit discrete at 54°.		3	9967			10064		0.1
100	W														
									2			C			0.2
					Py sp mag							N			
102							and more silica			10272			10264		
					sp mag		107.18 - 153.70 ANDESITE TUFF Light brownish grey to maroon to green to pale brown. Gradation between andesite tuff, with 30% maroon hematite-rich sections from 107.18 to 124.87, to an andesite-pyrophyllite tuff with only occasional hematite-rich intervals from 124.87 to 153.70. Lowermost half of section weakly to locally moderately pyrophyllitized, and locally weakly silicified. Chlorite more abundant in upper part than lower part. Occ. grey quartz veinlets up to 30 mm wide and generally at about 40° to c.a.								0.2
104					mag										
				M									10476		
				M	py					10571					0.1
106				M											
				M	(sp?) py mag				4				10718		0.2
108															

HOLE NO.: 1 | PROJECT: | PAGE NO.: 10 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: graphyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
108					py		(110.45) Faintly banded grey quartz vein 30 mm wide at 32° with local 1% cp along margins.		4	10851		NQ	10918		0.3
				W	cp(?)					10927					
110					py		(113.30 - 113.47) Fault. Grey, finely broken core and mud along fracture at about 30°.		3				11118		0.2
					cp										
							(118.88 - 119.48) Grey quartz vein with 1% py and traces ? cp along fracture surfaces as hairline veinlets			11186					
112															
										11364			11318		0.1
					mag										
114													11518		
				W											
116										11673					0.1
									2				11718		
118					mag										0.2
										11948			11918		0.1
				M											
120															

HOLE NO.: 1 | PROJECT: | PAGE NO.: // OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
120					mag		(120.42 - 121.23) Probable healed fault		2						
				m	py		(121.80) light green? pyrophyllite lining cavities within weakly fractured grey quartz vein. Not sericite nor calcite.		3				12118		0.1
122	m	I					(123.11 - 124.40) Magnetite rich (10%) interval with 1% hematite along fractures.			12352					0.2
				w	py		(124.20) Bright green chlorite (?) along margins of magnetite masses.		6				12318		
									3						0.2
					mag hem		(124.53) Greenish grey qtz. vein 20 mm wide at 10° with py vlts. along hairline fractures.						12518		
124	w									12557					
					py		(127.46) Watery grey quartz vein 29 mm wide at 40° with py vlts. along fracture surfaces.								0.2
									4						
126					py		(128.10 - 129.28) Moderately broken core.								
							(128.28 - 128.32) Pale grey breccia with grey vein quartz as angular clasts to ~ 7 mm across Traces diss. py						12718		0.1
									2						
					py		(129.60 - 130.31) Mottled grey quartz vein with 1% py along discontinuous irregular fractures; traces cp (?) Upper contact at 10°; lower at 25°			12801			12918		<0.1
	w						(130.54 - 130.73) As above with contacts at about 15°		<1	12594					
130															
	m									13075					
	m								2				13118		
132									4						

HOLE NO.: 1 | PROJECT: | PAGE NO.: 12 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: Pyrophyllite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
132					py mag cp		(133.08 – 133.52) Breccia. Angular clasts of various lithologies within py-rich matrix. Upper contact at 20°. Grey quartz vein.		4						0.2
				W	py		(133.93 – 134.03) Fault. Grey, finely broken core and mud between fractures at 63° to c.a.			133.19			133.18		
134							(134.19) Py, cp(?) vlts at 75° to 80°.		2						0.2
							(134.78) As above.								
							(134.98 – 135.56) Weak kaolinite alteration throughout and also along fracture sfcs.						135.18		
				W			(135.38) Fault. Finely broken core and white mud 22 mm thick on fracture at 32°.			136.24					0.1
136							(137.84 – 138.47) Interval 75% light grey quartz vein with < 1% py along hairline fractures, 25% tuff. Broken core with occ. smears white mud on fracture sfcs.					10	137.55		
							(139.96½ – 140.38) 20% grey quartz veins with 2% py along fracture sfcs.								
138				W			(139.75 – 141.29) Magnetite-rich (5%) interval. Occ py, cp vlts and disseminated.			138.68			139.18		<0.1
140					mag cp mag py					140.20			141.18		0.1
									2	141.27					
142									3				143.18		0.1
					py										
144									3						0.3

HOLE NO.: 1
COLLAR ELEV.:
GROUND ELEV.:
COORDINATES: N. E.
INCLINATION:
BEARING:
PROJECT:
DATE STARTED:
DATE FINISHED:
TOTAL DEPTH:
PAGE NO.: 13 OF
REF. TO CLAIM CORNER:
SCALE:
LOGGED BY: DJP

.70 / 1.08

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
144					py		(144.35 - 144.69) Py to 10% diss.	1	144.2					
	W				py		(144.85 - 148.27) Fault. Moderately to fine broken core and occasional mud. Ground core. Fracture at 148.27 at 50° to c.a. 1 % py along fractures and diss.	4				145.18		0.3
146				M										
				I			(149.61 - 150.82) Fault. Moderately to finely broken core with occ. mud and white Kaolinite along fracture surfaces. Fracture surface with slickensides at 149.61 at 55°		145.99					0.1
				M	py			1		65		147.18		
148					py		(150.00 - 150.75) Av. about 2% bright green chlorite(?)		147.07		NQ			0.2
					py		(151.11 - 153.70) Weakly silicified throughout; 10 - 20% grey quartz veins.	2	147.83			149.18		
150				I			(152.18 - 152.34) 10% bright green chlorite(?).							
				M			153.70 - 164.62 QUARTZITE with moderately silicified crystal tuff(?) intervals throughout.		149.96					<0.1
		W		M	py		Light grey to greenish grey, hard rock. Larger clasts up to few mm across. Interval is probably mainly a patchy vein quartz. Sulphides about 50% diss and 50% as vlts along fracture sfcs.	1				151.18		
152				W				3	151.79					0.1
		W												
		M										153.70		
154				W			(153.70 - 157.68) 1-2% white Kaolinite(?) speckles throughout where feldspars altered.	1	154.53					
		W		W										0.2
156		W					(158.73 - 160.26) Light greyish brown, weakly pyrophyllitized moderately silicified crystal tuff or agglomerate	2				155.70		

HOLE NO.: 1 | PROJECT: | PAGE NO.: 14 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: argillic	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
156		M		W	py		(162.33 - 162.39) 3% cp, 1% py diss and patches within band at 45° to c.a. within vein? quartz	2						0.1
		M												
		M			py		(163.11 - 163.37) Weak pale orange clay mineral alteration.		157.58			157.70		
158		M												
	W	M			py			1			N			0.2
	W	M		M										
160	W	M		M	py							159.70		
								2	160.67					0.3
							(163.39 - 164.62) 2-3% bright green chlorite.							
					py									
162					cp		164.62 - 168.18 QUARTZ BRECCIA. Light grey to light grey/st. green, subround to angular clasts upto couple of cm across. Similar composition to overlying quartzite. Contact with overlying quartzite gradational over a couple of metres.					161.70		
					py									0.2
				M					163.67					
164				M								163.70		
							(164.62 - 165.11) 3% bright green chlorite within matrix.							
							(166.55 - 166.67) 2% white kaolinite spots upto 5x3 mm.							<0.1
166												165.70		
				M	py		(167.80 - 168.18) 3% bright green chlorite within matrix	1	166.77					
														<0.1
168												167.70		

HOLE NO.: 1 | PROJECT: Expo | PAGE NO.: 15 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION: Propylitic	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
168							168.18 – 188.38 CRYSTAL TUFF Light grey, hard, siliceous, generally medium grained with occasional chasts about 2 mm across. Irregularly and faintly banded. Gradational contact over about 1 metre with overlying quartz breccia.								
				W	py										<.1
170				M					<1						
				M			(168.18 – 170.85) Green to pale yellow-green interval with up to 10% chlorite and focal, patchy weak to moderate clay mineral alteration.			169.97			169.70		<.1
				I											
172							(170.94) Fault. Finely broken core with minor mud 32 mm thick on fracture at 55°.			172.51			171.90		
					py		(171.32 – 171.58) Fault. Light grey finely broken core and mud on fracture at 50°; occ. white kaolinite(?) lining fractures within fault material?								.1
				M			(175.10) 2% cp, 2% py, traces bornite (?) within wispy band 10 mm wide at about 70° to c.a.		1		10		173.70		
174										174.34					
					cp		(175.91 – 176.64) Probable fault; moderately to locally finely broken core.								0.3
					py				2				175.76		
176							(179.13) 1% cp, trace bn(?) as irregular mass within grey quartz vein								
										177.39					0.2
				W	py								177.90		
178															
				W	cp bn					179.37					0.1
180									3	179.91	90		179.70		

HOLE NO.: 1 | PROJECT: | PAGE NO.: 16 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION (Pyrophyllite / Silica / Sericite)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
180			py		(182.05 – 182.28) Maroon magnetite-rich (to 5%) interval.		3						0.2
					(182.70 – 182.81) As above.						181.70		
					(186.90 – 187.10) Probable fault; finely to moderately broken core.								
182					(187.14) 1% cp on fracture sfc.			183.03					
			py										0.2
					188.38 – 189.77 BRECCIA. Light grey to pale brown to off-white. About 85% clasts of various generally felsic lithologies and 15% matrix of crystal tuff? Clasts subangular, most from about 4 mm to 45 mm across. Unit well cemented with silica as for overlying and underlying crystal tuffs. Vein quartz clasts contain py veinlets within breccia.						183.70		
184			py				2	185.01					<.1
	M												
186			py					186.38		NQ	185.70		
			cp		189.77 – 216.02 CRYSTAL TUFF. As for 168.18 – 188.38 Although here slightly darker colour, likely due to somewhat increased py content.								0.2
			py										
188					(189.87 – 190.21) Local patches 5% bright green chlorite.						187.70		
							1				188.83		0.1
								189.28					<.1
190		W					3				189.77		
													0.1
192											191.77		

HOLE NO.: 1 | PROJECT: EXP | PAGE NO.: 17 OF 92

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DTP

SECTION	ALTERATION: Propylitic	ALTERATION: Silicic	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
192					py					192.17					0.1
									2				193.77		
194										194.76					0.1
				M									195.77		
196					py					196.90					0.2
					cp?										
		I			py								197.77		
198							(200.18 - 200.86) Moderately broken core.								0.1
										199.19					
200													199.77		
										200.86					0.1
										201.77			201.77		
202					py		(203.85 - 205.59) Moderately broken core.								
					cp?										0.1
					py		(203.60 - 205.43) Ground core; 50% recovery.			203.60	50%		203.77		

HOLE NO.: 1 | PROJECT: Expo | PAGE NO.: 18 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY: DJP

SECTION	ALTERATION (argill / silica / sericite)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
204			py q py		(207.67 – 210.61) Moderately broken core. (210.50 – 211.08) Greyish maroon, magnetite-rich (5–10%) interval. 1% hematite. Local traces cp.		3	205.49	50		205.77		0.2
206			py		(211.88 – 217.02) Moderately to locally finely broken core.			206.96	53		207.77		0.1
208							2	208.78	90	NQ			0.1
210			py hem mag q py					210.00			209.77		0.2
212			py		(213.15 – 213.30) Fault. Finely broken core and mud on fracture at 61°.			210.61					
					(214.70 – 215.21) Fault. Softly finely broken core and mud intervals up to 6 cm wide. Fracture at 215.21 at 27° to c.a.		3	212.44	45		211.77		<0.1
214							1	213.57			213.77		
216							2	214.57					<0.1

HOLE NO.: EC-171 | PROJECT: | PAGE NO.: 19 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION (argillic, silica, sericite)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
216			py mag hem py mag py		216.02 – 290.77 ANDESITE. Pale green to pale greenish grey to pale brown to maroon; bleached looking. Generally very fine grained; much finer grained and more massive than andesite tuffs higher in hole. Possible flow. Locally faintly spotted and porphyritic especially in ~~almost~~ 25 or 30 m. Major fault at top of interval from 217.02 to 222.37 m depth; soft, finely broken, intensely fractured core and mud throughout. Fractures mainly from 60° to 63° to c.a. Fault interval contains 2% light grey vein quartz as irregular discontinuous veinlets to 1 cm wide; veinlets often offset across fractures. Pyrite within fault interval about 80% disseminated, 20% as irregular, discontinuous veinlets along fracture sets. From 216.02 to 220.00 fault interval contains maroon magnetite – (to 20%) and hematite – (to 1%) rich sections. Pyrite below fault interval about 70% disseminated, 25% as veinlets and bands, and 5% as irregular masses. (222.23 – 224.66) Moderately broken core.		2	217.62		NQ	216.02		<.1
218											218.02		.1
220							3	220.02			220.02		<.1
222							2	221.58			222.02		
224								223.11			224.02		<.1
226							1	224.63			226.02		<.1
228		M	M					225.85					<.1

HOLE NO.: | PROJECT: | PAGE NO.: 20 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
228				m									22802		
					py		(234.22) 1% py, traces bornite diss along feldspar veinlet margin		1						<.1
230				m									23002		
				m											<.1
232				m									23202		
															<.1
234					py								23402		
					bn										
					py										.1
236													23602		
					py		(237.99) Two bornite veinlets up to 2 mm wide at about 45° to c.a.								.1
238					bn?								23803		
					py										
240															

HOLE NO.: 1 | PROJECT: | PAGE NO.: 21 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Pyrophyll	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
240				M	py			1				242.02		<.1
242								2	242.77			243.02		<.1
244							(246.40-246.58) Fault. Light grey, finely broken core and mud on fracture at 32° to c.a.		245.66		NQ	244.02		
246				I				1				246.02		
247				M					248.41			248.02		
252							(252.47) Py vein 9 mm wide at 43°.					250.02		
254									251.46					

HOLE NO.: 1 | PROJECT: | PAGE NO.: 22 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
252			py				1				25202		<.1
254		M I I I			(255.42 - 257.16) Moderately to intensely brecciated; about 12% off-white, irregular feldspar veinlets.			254.54			25402		<.1
256											25602		
258								257.86					<.1
											25802		
260								260.68			26002		<.1
262			py				1				26202		<.1
264								263.68					

HOLE NO.: 1 | PROJECT: Expo | PAGE NO.: 23 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
264					(265-30) Healed fault. Breccia with angular andesite fragments 45 mm wide between fractures at 63° to c.a.		1				264oz		<.1
266					(267.71) Irregular py vlt about 6 mm wide at 45° with local bright pale green epidote (?) along margins.			266.10			266oz		
268								268.70			268oz		<.1
270								269.74			270oz		<.1
272								272.80			272oz		<.1
274											274oz		
276								275.99					

HOLE NO.: 1 | PROJECT: | PAGE NO.: 24 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
276			py		(277.66) Off-white feldspar vein 56 mm wide at 67° to c.a. contains 2% diss cp, 0.5% bn(?)		1				276.02		0.1
278			cp bn(?) py							N	278.02		
					(281.52) Py-rich (75% py) band 36 mm wide at 61°.			278.89					<.1
280		M									280.02		
282		W						281.92			282.02		<.1
284		M			(284.27 – 284.88) Possible fault: Moderately brecciated, moderately broken core. White feldspar veinlets cement breccia.		1-2				284.02		<.1
		W			(286.91) Py band ~5 mm wide at 65°.			284.69					<.1
286											286.02		
288								287.73					

HOLE NO.: EC-171 PROJECT: Expo PAGE NO.: 25 OF 25

COLLAR ELEV.: GROUND ELEV.: DATE STARTED: REF. TO CLAIM CORNER:

COORDINATES: N. E. DATE FINISHED: SCALE:

INCLINATION: BEARING: TOTAL DEPTH: LOGGED BY: DJP

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
288					(290.35 - 290.77) Breccia with angular andesite and white feldspar fragments in matrix of light green aphanitic to fine grained rock (partially feldspar-altered andesite?).		1			N	290.2		<.1
290		M						290.77			290.77		
					290.77 END OF HOLE								

Drill Core Data For Hole EC-171

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
6.71	8.71	142851	4570	65	680	1
8.71	10.83	142852	586	18	60	< 0.5
10.83	12.53	142853	566	36	105	< 0.5
12.53	14.53	142854	413	17	55	< 0.5
14.53	16.53	142855	2070	54	285	< 0.5
16.53	18.53	142856	751	16	235	< 0.5
18.53	20.53	142857	3190	27	485	< 0.5
20.53	22.86	142858	6240	49	480	0.5
22.86	24.87	142859	5940	39	770	0.5
24.87	26.87	142860	2460	120	420	< 0.5
26.87	28.87	142861	3120	131	390	< 0.5
28.87	30.87	142862	6580	216	600	< 0.5
30.87	32.87	142863	2750	306	385	< 0.5
32.87	34.87	142864	392	144	130	< 0.5
34.87	37.17	142865	423	77	160	< 0.5
37.17	39.17	142866	3810	86	380	< 0.5
39.17	41.17	142867	4350	97	465	< 0.5
41.17	43.17	142868	4900	132	385	0.5
43.17	45.17	142869	3880	102	285	< 0.5
45.17	47.17	142870	5640	119	475	0.5
47.17	49.17	142871	4630	65	585	0.5
49.17	50.69	142872	4950	104	430	0.5
50.69	52.27	142873	6820	92	1640	2
52.27	54.27	142874	4540	87	540	0.5
54.27	56.27	142875	4290	101	835	0.5
56.27	58.27	142876	2080	162	385	< 0.5
58.27	60.27	142877	4660	106	690	0.5
60.27	62.27	142878	8140	110	845	1
62.27	64.27	142879	5790	96	710	1
64.27	66.27	142880	6440	97	805	1
66.27	68.27	142881	7200	103	920	1
68.27	70.27	142882	8150	119	1140	2
70.27	72.27	142883	5870	91	775	1.5
72.27	74.27	142884	4380	64	520	0.5
74.27	77.38	142885	5340	93	570	0.5
77.38	79.38	142886	1600	84	385	0.5
79.38	81.38	142887	2320	55	440	0.5
81.38	84.43	142888	3700	51	560	1
84.43	86.43	142889	3980	55	610	1
86.43	88.43	142890	6110	80	765	2
88.43	90.23	142891	5340	81	1000	1
90.23	92.23	142892	3630	38	530	0.5
92.23	94.64	142893	1995	54	255	< 0.5
94.64	96.64	142894	4980	72	675	0.5
96.64	98.64	142895	3670	55	550	< 0.5
98.64	100.64	142896	5080	64	790	0.5
100.64	102.64	142897	5160	71	810	< 0.5
102.64	104.76	142898	4910	45	850	0.5
104.76	107.18	142899	1230	84	310	< 0.5
107.18	109.18	142900	4860	55	915	1
109.18	111.18	142901	4370	34	865	1
111.18	113.18	142902	4400	29	730	0.5
113.18	115.18	142903	4410	44	825	1
115.18	117.18	142904	3160	31	715	0.5
117.18	119.18	142905	4020	39	895	0.5

Drill Core Data For Hole EC-171

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
119.18	121.18	142906	8640	37	1510	0.5
121.18	123.18	142907	4460	43	925	0.5
123.18	125.18	142908	5690	39	1090	0.5
125.18	127.18	142909	1775	37	400	< 0.5
127.18	129.18	142910	632	59	280	< 0.5
129.18	131.18	142911	1055	68	260	< 0.5
131.18	133.18	142912	2230	50	610	< 0.5
133.18	135.18	142913	2080	50	435	< 0.5
135.18	137.18	142914	2150	33	400	< 0.5
137.18	139.18	142915	2060	53	295	< 0.5
139.18	141.18	142916	3040	53	585	< 0.5
141.18	143.18	142917	2850	34	595	< 0.5
143.18	145.18	142918	1225	37	410	< 0.5
145.18	147.18	142919	3100	25	595	< 0.5
147.18	149.18	142920	6770	45	1000	0.5
149.18	151.18	142921	5720	23	1090	0.5
151.18	153.7	142922	4240	34	1100	0.5
153.7	155.7	142923	984	21	645	< 0.5
155.7	157.7	142924	396	14	200	< 0.5
157.7	159.7	142925	2200	20	540	0.5
159.7	161.7	142926	2600	48	500	0.5
161.7	163.7	142927	3490	46	520	1
163.7	165.7	142928	2830	27	730	1
165.7	167.7	142929	841	28	420	0.5
167.7	169.7	142930	311	145	160	< 0.5
169.7	171.7	142931	1230	195	205	0.5
171.7	173.7	142932	6890	174	770	0.5
173.7	175.7	142933	8300	99	540	1
175.7	177.7	142934	3360	65	260	< 0.5
177.7	179.7	142935	8260	138	885	1
179.7	181.7	142936	9070	86	765	1
181.7	183.7	142937	8850	83	850	0.5
183.7	185.7	142938	4300	73	435	0.5
185.7	187.7	142939	7730	121	595	1
187.7	188.83	142940	2280	78	390	< 0.5
188.83	189.77	142941	1110	27	180	< 0.5
189.77	191.77	142942	6120	56	1100	1
191.77	193.77	142943	8160	93	595	1
193.77	195.77	142944	3870	153	745	< 0.5
195.77	197.77	142945	954	130	315	< 0.5
197.77	199.77	142946	2340	91	240	< 0.5
199.77	201.77	142947	498	111	320	< 0.5
201.77	203.77	142948	4530	148	490	< 0.5
203.77	205.77	142949	5820	162	420	0.5
205.77	207.77	142950	2170	109	265	< 0.5
207.77	209.77	142951	1675	153	270	< 0.5
209.77	211.77	142952	4230	224	580	< 0.5
211.77	213.77	142953	2080	111	255	< 0.5
213.77	216.02	142954	1640	128	155	< 0.5
216.02	218.02	142955	1045	23	130	< 0.5
218.02	220.02	142956	885	46	90	< 0.5
220.02	222.02	142957	1750	53	185	< 0.5
222.02	224.02	142958	3270	72	250	< 0.5
224.02	226.02	142959	2610	24	200	< 0.5
226.02	228.02	142960	4070	21	330	0.5

Drill Core Data For Hole EC-171

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
228.02	230.02	142961	3750	37	475	< 0.5
230.02	232.02	142962	2890	50	285	< 0.5
232.02	234.02	142963	1040	18	200	< 0.5
234.02	236.02	142964	1355	43	130	< 0.5
236.02	238.02	142965	3320	316	390	0.5
238.02	240.02	142966	4390	80	430	0.5
240.02	242.02	142967	5220	45	365	0.5
242.02	244.02	142968	680	5	50	< 0.5
244.02	246.02	142969	1185	44	95	< 0.5
246.02	248.02	142970	624	24	45	< 0.5
248.02	250.02	142971	1050	20	50	< 0.5
250.02	252.02	142972	1275	144	50	< 0.5
252.02	254.02	142973	218	3	25	< 0.5
254.02	256.02	142974	402	30	15	< 0.5
256.02	258.02	142975	326	18	20	< 0.5
258.02	260.02	142976	211	24	15	< 0.5
260.02	262.02	142977	275	20	30	< 0.5
262.02	264.02	142978	89	1	5	< 0.5
264.02	266.02	142979	188	35	10	< 0.5
266.02	268.02	142980	79	2	5	< 0.5
268.02	270.02	142981	116	2	5	< 0.5
270.02	272.02	142982	155	3	10	< 0.5
272.02	274.02	142983	159	9	5	< 0.5
274.02	276.02	142984	253	35	15	< 0.5
276.02	278.02	142985	168	2	10	< 0.5
278.02	280.02	142986	123	2	10	< 0.5
280.02	282.02	142987	129	1	10	< 0.5
282.02	284.02	142988	60	1	15	< 0.5
284.02	286.02	142989	67	1	5	< 0.5
286.02	288.02	142990	60	1	5	< 0.5
288.02	290.77	142991	50	2	10	< 0.5

HOLE NO.: EC-172 | PROJECT: Expo | PAGE NO.: 1 OF 39

COLLAR ELEV.: 2086.6 | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: 244/40 N. 233544 E. | DATE FINISHED: May , 1990 | SCALE: 1" = 2 metres

INCLINATION: -90° | BEARING: ——— | TOTAL DEPTH: 459.33 | LOGGED BY: D. J. PAWLIUK

COMMENTS: 2.07

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
0							0.00 – 1.52 OVERBURDEN; CASING.							
							1.52 – 259.63 QUARTZ BRECCIA Pale grey to off-white to grey. Orange and red-brown sections where limonitic iron oxides present, abundant mainly above 62.49 m depth. Hard, weakly to locally moderately fractured throughout. Rock often spotted with off-white to cream to orange-pink areas where kaolinite(?) present; this clay mineral forms about 3% of the rock volume on average. Breccia fragments generally average a few mm across, with the largest fragments 2 to 6 or 7 cm across. About one third of the rock unit appears to have been pervasively soaked by silica; here both the breccia fragments and the matrix are almost entirely quartz. Limonite has formed by the weathering of pyrite, especially above 62.49 m depth. Below 62.49 m breccia matrix has an appreciable pyrite component, and pyrite often forms 3 to 5% of the rock volume. Rock often vuggy where sulphides and, possibly, other minerals have been weathered out above 62.49 m depth. Quartz veins almost always throughout by hairline fractures a couple mm apart.		1.52			1.52		
2								<1		85		#33154		<.1
4		W		M					3.96					
												4.50		
6		W							5.79		NQ			<.1
												7.50		
8				M		(1.52-3.96) Ground core; 85% recovery			8.23					<.1
												9.50		
10							(1.52 – 3.47) Moderately broken core.							
							(2.90 – 3.88) 10 to locally 40% pale pink clay mineral; pink colour likely due to small amount of iron oxide.		11.28					
12		W					(2.90 – 3.96) 5–10% watery grey, discontinuous irregular →							

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 2 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
12							randomly oriented quartz vlts to 5 mm wide. At least 3 generations of vlts.							<.1
							(4.54) Angular quartz bx fragment 17 mm across.							
							(5.23) Fault. Cream to pale yellow to pale red mud and finely broken core 70 mm wide between fractures at 48°.	<1						
												13.50		
14		M					(6.05) Fault. Pale pink-brown mud and finely broken core 60 mm thick on fracture at 43°.		14.33					
							(7.07-7.37) 3% watery quartz vlts, mainly subparallel c.a.							<.1
							(8.39-8.49) 5% interlocking, very fine, grey quartz vlts crosscutting yellow to pink clay band. Possible healed fault.							
16		M					(8.81) White, subround feldspar bx fragment 38 mm across.					16.50		
							(10.83) Vugs up to 15 by 8 mm across.							
							(10.90) Orange, brown and red banded iron oxides across 5 cm.							
							(13.81) Pale grey quartz vein 11 mm wide at 51°.							
							(13.88-14.87) 15% orange-cream clay mineral as irregular spots and masses.		17.37					
18							(15.49-15.72) As above.							<.1
							(17.80-18.66) As above.							
							(18.12) Quartz vlts 4 mm wide at 52° and 78°.							
		W					(19.80) Discontinuous vlts of dark brown, very fine pyrite(?) up to 1 mm wide at 12° to c.a.					19.50		
		W												
20		W					(21.15) Light grey quartz vlt 7 mm wide at 17°.							
							(22.67-23.79) Abundant Orange-brown to red-brown limonite stain where py has been weathered out of breccia veinlet up to 9 mm wide; veinlet subparallel c.a. Fresh breccia veinlet material about 50% py, 50% pale grey vein quartz pieces to 3 mm across. A		20.42					<.1
22												22.50		
								<1						
				W	lmt py			3	23.47					<.1
24								<1						

HOLE NO.: AC-172 | PROJECT: | PAGE NO.: 3 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: (23.97-29.16) DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
24		M					Watery grey moderately fractured quartz vlts to 9 mm wide at 25 and 58° form 5% rock volume.		<1						<.1
		M					(26.52-29.57) Ground core: 93% recovery.						25.50		
26							(26.73) Watery grey quartz vlt 8 mm wide at 42°.								
							(27.85-29.57) Moderately to somewhat broken core.								
							(30.68-31.01) 5% red-brown to black lmnt where sulphides have been weathered out.			26.52					<.1
28				W			(32.45) Faint, pale grey quartz veinlet 7 mm wide at 10° to c.a.				93		28.50		
							(33.02) Breccia vlt with quartz clasts in pale brown, kaolinite(?)-rich matrix. Veinlet 15-35 mm wide, at 20 to 15° to c.a.					NQ			
				W			(34.42) Contorted, broken, pale grey quartz veinlet 5 mm wide at about 25°.			29.97					<.1
30					lmnt										
				M									31.50		
32		W								32.61					<.1
34													34.50		
															<.1
										35.66					

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 4 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: | AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
36		W		I I	lmnt		(36.92–37.80) 10% limonite within breccia matrix; interval not pervasively silicified as is both overlying and underlying breccia. Moderately broken core. Vugs up to few mm wide where sulphide bands have weathered out of rock. Breccia matrix mainly kaolinite, not lmnt, below 37.68 m.	<1						<.1
38		W W W					(38.63) Breccia vlt with pale brown to cream coloured, kaolinite(?)-rich matrix 23 mm wide at 10°.		38.71			37.50		<.1
							(39.78–40.23) Somewhat broken core. Orange lmnt along fracture sfcs.							
40		W W					(42.10–43.08) Somewhat broken core. 5% limonite as breccia matrix. Similar to 36.92–37.80 except here less lmnt and no band-shaped vugs. Upper contact with pervasively silicified bx at 15°, lower at 15°.		40.23			40.50		
42				M M M	lmnt		(43.30–43.78) Irregular bx band with lmnt matrix as above, approx. subparallel c.a.; irregular contact with adjacent silicified bx.		41.76					<.1
		W					(46.92–47.11) 10% off-white feldspar as irregular masses to 20 mm across.							
44		W W					(47.72) Creamy white band of granular feldspar 9 cm wide at about 30°.		44.82			43.50		<.1
46		W					(48.82) Pale brown (wispy lmnt along fractures) feldspar band or vein 33 mm wide at 37°.					46.50		
48									47.85					<.1

HOLE NO.: CC-172 | PROJECT: | PAGE NO.: 5 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
48		M		W			(52.67) Off-white feldspar veinlet 4 mm wide at 15°.		<1						<.1
				W			(53.08) Banded cream feldspar veinlets and light brown very fine granular quartz 35 mm wide at upper margin of breccia interval with limonitic matrix.						49.50		
50		W													
		M					(53.08 - 53.73) Breccia with 5% limonite within matrix, not pervasively silicified as is overlying breccia. Upper contact at 15°, lower at 20°. These breccias with a limonitic and/or pyritic matrix formed after the pervasive, weak to moderate silicification of the typical quartz breccia in this drillhole.			50.90					<.1
		M													
		M													
52		M											52.50		
		M													
				M			(54.09 — 63.67) Predominantly (90%) coarse grained (larger clasts often 3 or 4 cm across) late-stage breccia with average about 3% pyrite and/or limonite as matrix material. Upper contact irregular; lower at 62°. Pyrite occurs as wispy, irregular masses of finely disseminated sulphide within breccia matrix, and also finely disseminated along irregular hairline fractures. Late-stage breccia matrix only locally pervasively silicified, generally not silicified.								<.1
				I	lmnt				<1						
				M						53.94					
54				M	py				3				55.50		
				I											
56				M					1						
				M			(55.25 - 56.04) Moderately to somewhat broken core.		3	56.99					
	M			M			(55.44) Clast of pervasively silicified quartz breccia 53 mm across within late-stage quartz breccia with limonitic matrix.								
	M			M											
58				M									58.50		
				M											
	M			M					1						<.1

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 6 OF 39
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: | N. | E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
60		W		M	lmnt py		(62.34) White feldspar vlt 4 mm wide at 15°	1	60.05					
				I	lmnt		(62.48) White feldspar vlt 6 mm wide at 37°, offset 5 mm across fracture at 45°; this fracture lined by 1 mm wide white feldspar vlt.	3						<.1
				I	py			1				61.50		
62				W			(62.94) Cream coloured, hard fine grained, Kaolinite(?), feldspar- and quartz-rich band 11 cm wide at 35° to c.a.; probable healed fault.	5						
				M	lmnt py			1						
				I	lmnt		(63.48) Vugs up to 16 mm across in limonitic breccia.	4	63.09					
64		M		W			(63.67 – 86.08) Light grey to off-white interval with minor pale brown and pale green coloured sections. Off-white patchy Kaolinite from 1 to locally 60%, average 5 to 10% over interval. Weakly silicified rock. Kaolinite patches often have faint boundaries, + almost always irregular shapes. Pale green mineral locally present in the core of Kaolinite patches throughout; green mineral has same mode of occurrence as Kaolinite.	1						<.1
		W	W	M								64.50		
		M		W										
		W	W	W				2						
66		M		M	py				66.14					<.1
		W	W	W										
		M	W				(64.78 – 65.05) Band of coarse, later, silicified bx at 55°.							
68		M					(65.91) Py vlt 2 mm wide at 32°, offset by pyritic hairline fracture subparallel c.a.	2				67.50		
		W	W				(66.59) Py vlt 3 mm wide at 27°; banded.							
		W					(70.85 – 71.14) Coarse bx band at 40°.		69.19			69.40		<.1
70		M	W	W	py		(71.45) Probable healed fault at about 70° to c.a.							
		W		M			(72.10) Hairline py vlts at about 27° to c.a.							
		M		W			(72.72) Bright blue mineral (not calcite) as irregular mass with faint boundaries. Probable alteration product.	2				70.50		
72								1						

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 7 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N.. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
72			M				(72.97 - 76.18) Py occurs mainly (~70%) as irregular masses of diss sulphide spotting the core, and 30% as irregular, narrow, discontinuous veinlets.		1	72.73					
									2						<.1
							(74.04) Vugs to 16 mm across lined with pale grey, soft, waxy, translucent mineral (not calcite).						73.50		
74				M	Py		(74.20) Rounded kaolinite (or white feldspar?) masses rimmed by grey mineral described above. Probably 2 generations of grey mineral.								
							(75.80) Py vlt 1.5 mm wide at 25°			75.27					<.1
							(76.92) Brown-grey late bx band 7 cm wide at 32°						76.50		
76							(78.38 - 79.73) Moderately kaolinized bx cut by irregular bands and fractures filled by brownish grey, fine grained, younger breccia. Younger breccia ranges from about 60% matrix, 40% clasts to 5% matrix, 95% clasts.								<.1
78		W	W												
				W			(79.73) Lower contact of younger bx band at 24°, discrete.			78.73					
				M			(80.22) Late breccia band 31 mm wide at 65° contains about 20% diss py within matrix.						79.50		
				I											
80							(82.12) Hairline py vlts at 60°								
			M		Py		(82.57) White, soft ?pyrophyllite veinlet 5 mm wide at 28°		2						
							(83.74) Watery, brownish grey, soft pyrophyllite(?) vlt 4 mm wide at 70°			81.38					<.1
			W												
			M				(84.84) Py vlt 2 mm wide at 39°								
82			W						1				82.50		
			M												
			W												
84															

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 8 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
84							(86.05) Off-white feldspar vlt 8 mm wide at 16° ~~with~~ cut by py vlt 1 mm wide ~~along upper margin~~ at 9°.		1	84.92					<.1
					py		(86.82) Py vlt 3 mm wide at 22°.		2				85.50		
86	W	W		W			(88.39) Py vlt 4 mm wide at 14°.								
		W			py										<.1
		W								87.47					
		W													
88	W	W		M					3				89.50		
									2						
		W										NQ			
	W														<.1
90										90.53					
	W	M											91.50		
92		I					(96.54) Late ~~bx~~ band 4 cm wide at 55° with pyritic matrix.		1						
94										93.54			95.0		
96	W														

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 9 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: prophyl.	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
96							(96.90 – 98.06) Very pale greenish grey pyrophyllite patches ^ 20 to 40% and spots often with kaolinite rims.		1	96.12					<.1
	W	W					(97.46) Healed fault 1.5 cm wide at 16°; abundant lmnt along fractures.								
	M			M	py										
	W														
	M														
98	W		W				(98.19) 5% py as irregular masses over 2 cm.						97.50		
	W						(98.66–99.13) As for 96.90–98.06; 50%.								
	W						(99.85) Py (60%) – pyrophyllite (?) 40% vlt 2 mm wide at 43°.								
	W						(100.57) Red-brown limonite seam 6 mm wide at 7°; possible healed fault. Subhedral crystals of limonite (psuedomorph after ??) within lmnt seam oriented at about 45° to seam margin. Weird. elongate								<.1
100	W									99.66					
	M												100.50		
	M	W					(102.60 – 103.21) Late breccia ^ with finely diss py within matrix. usually								
							Upper contact at 17°; lower at 55°.								
	W								1						<.1
102	M	W					(103.10–103.26) Dark brown, py-rich section.			102.71					
				M	py		(103.80) Vugs. to 6 mm across.		6						
							(106.72 – 106.90) Moderately silicified band at 50°.						103.50		
104															
	W								1						<.1
	W														
106		M			py					106.16					
		W											106.50		
108	W	M		M											<.1

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 10 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: | AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
108	W						(108.31) Py vlts 1 mm wide at 48°.	1						
	M				py		(108.90) 3 py vlts to 2 mm wide at 25°.		108.81					<.1
	W						(109.03) Late bx vlt with pyritic matrix 6 mm wide at 40°.							
	M	W		W			(111.08) As above; 6 cm wide at 35°.					109.50		
110	W	W					(111.66) As above; 3 mm wide at 27°.							
	M						(111.86 - 112.21) As above; fine grained clasts (av. say 2 mm), also py clasts. Upper contact at 17°, lower at 19°.							
	W													
	M			W			(113.46 - 113.73) Moderate to weak off-white kaolinite alteration, about 10% rock volume.		111.86					<.1
112	W	W		W	py		(114.80) Py vlt, containing wallrock fragments, av. 3 mm wide at about 20° to c.a.					112.50		
	M						(115.95) Py vlts 1-2 mm wide at 40°.							
	M						(116.93 - 119.30) Late quartz breccia. Abundant coarser clasts; 90-95%; 5-10% matrix. Matrix not as pyritic as for typical late breccia; py content about 3% av.							
114	W													<.1
	M						(117.01 - 117.43) Rock bleached to pale grey colour; moderate clay mineral alteration.		114.91					
	W			M										
	M			W			(118.52) As above and band 5 cm wide at 39°; also orange limonite stain.					115.50		
116	W			W				1						
	M						(118.66 - 119.02) 10% py in matrix and as angular clasts to 11 mm across.							<.1
									(117.5)					
118								3	119.30					
				W	py									
120				M				1						

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 11 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Propylitic	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE. CORE RECY / HOLE	SULPHIDES %	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. OF SAMP. INT.	ESTIMATED % Cu
120	M			W			(121.28 – 127.33) Late breccia, ~~grey to brownish grey~~, coarse grained with about 75% angular clasts to 5 cm, 25% pyritic matrix. Matrix from about 5% to ~75% py, finely disseminated locally. Overall py component about 5%. Upper late bx contact at 17°; lower at 46°. About 1% of coarser clasts are py. 95% of coarse clasts typical silicified, variably pyrophyllitized quartz bx which overlies + underlies late bx interval. Matrix slightly less pyritic in lowermost quarter of interval.		1						
	lw	M			py					121.00					<.1
122									5				121.50		
					py										
		W													<.1
124										129.05					
													124.50		
							(124.68) Pyrophyllite (60%) – py (25%) – kaolinite (15%) band 3 cm wide at 50°.								<.1
126									5						
							(128.92) VH of finely diss py (60%) and other material (40%) 3 mm wide at 19°; looks like late bx matrix material			127.10				.1
	M				py								127.50		
128	M	W							1						
	M			W			(130.26 – 131.23) Fine grained grey andesitic tuff? 30% altered to pyrophyllite as spots 4 to 8 mm across.		1-2						<.1
	W														
	M						(132.13 – 136.15) Late bx as for 121.28 – 127.33 except py evenly distributed throughout. Upper contact at 21°; lower at ~30°.			139.5					
130	W												130.50		<.1
	W														
	M						(132.33) Brown py clast rimmed on one side by 1 mm wide band bright, light yellow, younger (?) py.								
132															

HOLE NO.: C-172 | PROJECT: | PAGE NO.: 12 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
132							(134.24 - 134.60) Light grey to orange interval where py[1] leached from late bx matrix. Limonite present.								<.1
					py		(135.04 - 135.10) As above.		5	133.20			133.50		
							(135.22 - 135.91) As above; 10% off-white kaolinite in lower half.								
134							(136.58) Py vlt 2 mm wide at 34° to c.a.		3						
							(137.00) Py vlt 1 mm wide, irregular, subparallel c.a.								<.1
							(137.17 - 137.36) Off-white, moderately altered to kaolinite and also to pyrophyllite. Weakly silicified.								
136	M			M						136.94			136.50		
	W	W					(137.36 - 138.71) Late bx as for 132.13 - 136.13; lower contact at about 15° to c.a.								
							(139.27 - 139.87) Pale orange to pinkish red interval where py (?) weathered from bx matrix. Bx here fine grained, coarser clasts av. 2-3 mm across.		5						<.1
138					py										
										139.29					
					lmnt		(141.50) Red to orange lmnt coats fracture subparallel c.a.		2						
									1				139.50		
140							(142.12 - 143.45) Coarse bx with subround to subangular clasts in matrix of pyrophyllitized, light brown andesitic tuff (?). Larger clasts several cm across. Lower contact at about 15° to c.a.								
	W	M		W											<.1
		M													
142				W						142.34			142.50		
															<.1
144		I													

HOLE NO.: LE-172 | PROJECT: | PAGE NO.: 13 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: chlorite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
144		I					(147.93 – 148.9) Moderately silicified quartz bx is here moderately brecciated and fractured; cream coloured Kaolinite forms breccia matrix. Kaolinite often stained orange by Imnt.		<1						
		W			py										<.1
	W						(149.36 – 152.43) Moderately silicified quartz bx spotted by 3% off-white Kaolinite masses usually few mm across, Orange-brown Imnt on fracture sfcs			145.38			145.50		
146	W														
	W	M													
		M					(152.63 – 152.90) Possible healed fault. Quartz breccia clasts (10%) in pale greyish green v. fine grained matrix (90%) which could be silicified fault gouge. Between fractures at 42°.			146.91					<.1
148		M		M											
		M					(154.68) Late bx vlt with py matrix 30 mm wide at 17°.						148.50		
		M													
		M		W					<1	149.96					<.1
150		M													
		M													
		M		W						151.49			151.50		
152		M													
		M													<.1
	W														
154										154.53					
	W								2				154.50		
	W	W							1						<1
156	W														

HOLE NO.: LC-172 | PROJECT: | PAGE NO.: 14 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
156	W		W		Py		(157.47–159.92) About 10% late(?) quartz breccia as narrow bands and patches.		<1	156.97					<.1
		W		W			(161.54–162.76) Ground core; 57% recovery.						157.50		
158							(161.48–180.26) 3% locally 10% av. spotted with off-white to pale orange kaolinite								
		W					(165.02–165.80) Late breccia, probable healed fault; pale brown matrix may be silicified fault gouge. Brown limonite on fracture sfcs.			160.02					<.1
160							(166.12–166.22) As above at 21° to c.a.						160.50		
		M		W			(166.36–166.49) As above at 20°.								
							(169.23) As above subparallel c.a.			161.54					
162											57				
		W													<.1
										162.76					
164				W									163.50		
				M	limonite										<.1
166		M			limonite					165.81			166.50		
															<.1
168															

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 15 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
168				W			(171.37) As above; 2.7 cm wide at 19°.	<1						
	W						(171.89) As above; 2.5 cm wide at 22°.		169.86					<.1
	W						(174.49 - 175.55) Yellow to orange-brown limonite on fracture sfcs subparallel c.a. and at 40°.					169.50		
170		M					(176.41) Light grey quartz vlt 4 mm wide at 32°.		169.77					
	W						(176.96) As above 5 mm wide at 25°.							
														<.1
172	W	M										172.50		
	W								172.82					
174		M												<.1
								<1				175.30		
176									175.86					
	W													<.1
178		M		W								178.50		
		W							178.91					<.1
180		W												

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 16 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
180							(181.29 – 184.05) Late breccia; 85% clasts, 15% matrix. Finely diss py within matrix and also within occasional clast. Fairly coarse grained; clasts upto ~7cm across. Matrix not as pyritic as for other late breccia bands and vHs higher in hole.		<1						
															<.1
182					py		(184.38) Lmat 2 mm wide on fracture at 49°.		2	181.96			1815		
							(186.94) Late bx band 6 cm wide at 50°; 5% py diss within matrix.								<.1
184	W	M		W			(186.00 – 191.64) Late breccia where moderately silicified bx clasts 70% in matrix ± of pale greyish brown very fine grained pyrophyllite(?) with minor quartz grains.		1				1845		
		M		M						185.01					
		M		W											
186		M		M											<.1
		M		M											
	W	M		W	py				4				1875		
		M		W											
188		M		W											
	W	M		W						188.06					<.1
		M		W						188.67					
		M		W					<1				1905		
190	W	M		W											
		M		W											
	W	M		W						191.10					<.1
192															

HOLE NO.: L -172 | PROJECT: | PAGE NO.: 17 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Chloritic	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
192		M		W			(192.55 – 193.69) Late bx with light grey, quartzitic matrix		<1						
					py		(197.35 – 198.87) Late bx with grey to brown-grey matrix with more py than from 192.55–193.69. Occasional py clasts; variety of lithologies in clasts.		2				19350		
194		M					(196.30 – 197.35) Pale grey, intensely silicified.								
		M		M			(198.87 – 214.73) Pale grey to light grey, intensely to moderately silicified. Locally moderately fractured.		<1	19415					
		I		I											
196		I											19650		
		I													
		I			py					19659					
									3						
198															
		M					(203.38) Late breccia band about 10 cm wide with pale brownish grey quartzitic matrix			19969					
200		I							<1				19950		
		M		M											
		I		M											
202		I		M											
		I											20250		
		I		M						20269					
		M													
204		I													

HOLE NO.: A-172 | PROJECT: | PAGE NO.: 18 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
204		M		M			(204.37) Vugs to 11 mm across.		1						<.1
	W	M			py		(204.89) Late bx vlt with pyritic matrix, 11 mm wide at 26°.			205.13					
		I					(208.21 – 208.36) 0.5% py, 1% dark blue, acicular mineral,		<1						
206							often as radiating (very) crystals to few mm long.						205.50		
		M					(208.64 – 208.78) 5% py as bx matrix.								<.1
	W	M					(209.20 – 213.39) Generally moderately broken core.								
208					py		(210.70 – 210.81) 3% dark blue mineral as at 208.21–208.36.			208.17					
		M					Pale grey pyrophyllite (?) present as subround masses up to 3 cm across.						208.50		
							(211.12) Vugs to 8 mm across.								
210		I													<.1
		I													
		I													
211		M								211.22			211.50		
		I													
		I													
212		M													
		I								212.44					<.1
		M													
214		I													

HOLE NO.: -172 | PROJECT: | PAGE NO.: 19 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
214		M					(217.71) Late breccia band 3 cm wide at 60° with pyritic matrix.		<1				21950		
216	W						(220.70 - 221.08) Late bx with pyritic matrix; contacts at about 50° to c.a.			21549					<.1
		M			py		(222.02 - 222.40) Py along fractures and as irregular masses within brecciated interval. No distinct late breccia band as seen higher in hole.								
218	W												21750		
	W						(223.79) Late bx band with minor (2%) py diss within matrix; band 6cm wide at 40°.			21854			33276		<.1
		M													
220	W														
		W		W	py		(224.84 - 225.21) Late bx interval with pale brown to pale grey, hard, silicified (?) matrix. Only local py traces. Contacts at 53°.		4	22158			22050		
									1						<.1
222		M		M	py				3						
		M					(225.30 - 225.40) Moderately brecciated band (late bx) with white feldspar matrix; contacts at 32°.								
		W													
		I					(225.78) White feldspar vn 5 mm wide at 50°.		1				22350		
224		I					(225.90) Vugs to 11 mm across.								
				I						22463					<.1
	W	M													
226															

HOLE NO.: E-172 | PROJECT: | PAGE NO.: 20 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: prophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
226	W				py		(227.88 – 228.66) 10% white kaolinite alteration; somewhat broken core. Possible fault at 227.53 within intensely fractured portion.		<1				226.50		
	W						(228.77) Late bx vlt with py matrix 5 mm wide at 43°.								
228		M		M			(233.92 – 234.27) Late bx with pyritic matrix. Clasts up to 3 cm across; 8% py.			227.68					<.1
	M	M					(234.30 – 235.87) 3 to 10% white kaolinite alteration as irregular spots to few mm across.								
230		M											229.50		
							(235.13) Band of v. fine grained quartz and pyrite grains 4 cm wide at about 20°. Looks exactly like late bx vlt except 1% coarser clasts, mainly matrix.								
	W	W								230.73					<.1
232															
		M											232.50		
		M													
										233.78					
234				M	py				8						<.1
									1						
236				W									235.50		
	W	M		W											
										236.82					<.1
238	W	M													

HOLE NO.: :-172 | PROJECT: | PAGE NO.: 21 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
238	W	M		M	py		(240.12) Late bx vH with pyritic matrix (85%) clasts (15%) 2 cm wide at about 15°.	1				238.5		
							(243.96) As above 3.5 cm wide at 20°							<.1
240		M			py		(244.28 - 244.56) Late bx band 90% clasts 10% matrix at about 25° to c.a.; band about 1% py. Occasional py clasts to 3 mm.	3	239.8					
							(244.88 - 244.97) Moderately brecciated; white feldspar vein material forms bx matrix.	1				241.5		
242	W	M												
		M					(245.97 - 246.60) Late bx with pyritic matrix. Moderately banded over topmost 7 cm at 70°; possible healed fault.		242.9					<.1
	W	M												
		M												
244	W	M					(246.96) Late bx vH with pyritic matrix 4 cm wide at about 30°.					244.5		
							(247.65) Py band 4 cm wide at 60°							
246	W	W						8	245.7					<.1
				W	py									
				I				1						
248		M		W	py							247.5		
				W					249.0					<.1
250														

HOLE NO.: L-172 | PROJECT: | PAGE NO.: 22 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: Increasing pyrophyllite content with depth.

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
250	W	M					(251.67) Py band 2 cm wide at 53°.	<1		1		25050		
		M		M	Limit py		(254.22 - 258.63) Intensely fractured, weakly brecciated, weakly to moderately silicified interval with pale brown pyrophyllite and orange-red limonite lining fracture surfaces. Interval is contact zone with underlying rock unit, a pyrophyllite tuff. Contact gradational over about 1 m where bands of the two rock types intermixed.							
252	W								25206					<.1
	W	M												
254												25350		
							(258.07) Fault. 3 mm orange mud on fracture at about 30°.							
							259.63 - 270.21 PYROPHYLLITE BRECCIA (TUFF) Light grey to brown to medium grey. Fine grained pyrophyllite tuff forms angular breccia clasts up to few cm across in matrix of light grey-brown pyrophyllite(?), pyrite, quartz and grey clay in varying proportions; quartz content decreases and pyrite content increases from top towards bottom of interval. Generally moderately broken core, poor recovery. Gradational contact with overlying quartz bx; quartz bx fragments and bands present to 262.40 m depth.		25511					<.1
256												25650		
258		M		I					25816					<.1
	=													
260		W		M				<1				25950		
		M		I										
		W		I	py									
		W	W	I					26121					<.1
262		W		M										

HOLE NO.: L-172 | PROJECT: | PAGE NO.: 23 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: 2-13

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
262	W	W	W	M	py		(261.21 – 263.96) Ground core - 77% recovery.	<1				26250		
							(265.14 – 265.25) Possible fault. Finely broken core.	3		77				
				W			(265.90 – 266.03) As above; fracture at 42° to c.a., smear dark grey mud on							
264				W					26395					<.1
	W			W			(266.63 – 266.89) Possible fault; finely broken core and mud.							
				W	py		(266.93) As above across 2 cm.		26532					
				W			(267.43) Fault. Finely broken core and mud about 6 mm thick on fracture at 62°.					26550		
266	M			W										
				I			(267.49) Py band 23 mm wide at 33°.							
							(267.49 – 268.66) Weakly to moderately fractured, brown, pyrophyllite tuff.		26700					
				W				2						<.1
268				M	py		270.21 – 309.81 PYROPHYLLITE TUFF Light greyish brown, fine grained, locally faintly foliated.		26838			26850		
	M						(270.21 – 272.19) Moderately broken core.							
							(270.21 – 270.32) Fault. Finely broken core and mud on fracture at 48°.	6	27066					<1
270	M				py									
							(270.35) Py vlt 3 mm wide at 75°; offset by fracture at about 10° to c.a.	1				27150		
	M													
272				M			(271.84 – 272.10) Fault. Finely broken core along fractures at 28°.							
	M			W			(272.55) Fault. Mud and finely broken core 1.5 cm thick on fracture at 65°		27219					<1
	M						(273.00) Wispy py vlts at 35° and 54° to c.a.	3						
274							(273.30 – 274.32) Moderately broken core							

HOLE NO.: L-172 | PROJECT: | PAGE NO.: 24 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: 76 | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
274	M			M			(273.97) Fault. Finely broken core and mud 7 mm thick on fracture at 11° to c.a.	3	274.32	82		274.50		
	M			I			(274.30) As above, .25 mm thick at 85°.							
	M		W				(274.32 - 275.23) Ground core; 82% recovery.		275.23					<.1
	W			M			(274.42) Py band 6 mm wide at 37° offset by fracture.							
276	W				py		(274.62 - 275.51) Moderately to finely broken core. Fault at about 274.90 marked by 20 cm mud and finely broken core.			95				
							(275.23 - 277.98) Ground core; 95% recovery.					277.50		
							(275.80) Py vlts to 2 mm wide at 40°.							
							(277.10) Py band 2.5 mm wide at 65° offset by fractures.		277.98					
278							(280.58) Greyish brown py-rich (40%) irregular band 9 cm wide at 45°.							<.1
		W		W			(281.52) Py-rich (45%) band 3.5 cm wide at 28°.							
280							(282.38) Fault. 8 mm mud and finely broken core on fracture at 32° to c.a.		279.81			280.50		
							(283.50) Py band 5 mm wide at 60° offset by fractures.	2						<.1
282				W	py				282.55					
				M	py							283.50		
284									284.37					<.1
	M													
286														

HOLE NO.: [illegible]-172 | PROJECT: | PAGE NO.: 25 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
286							(288.87) Py vlt 2 mm wide at 33°.	Z	28520			28650		
					Py		(291.39–291.62) Fault. Moderately to finely broken core and ~~pale~~ grey mud on fractures at 35°.		[illegible]					
				W										<.1
288				W			(293.78) Py-rich (45%) band 13 mm wide at 52°.							
		W		W			(297.62 – 300.76) Mainly grey coloured rock; possibly less pyrophyllite than adjoining sections		28937			28750		
290				M										
		W		M								33250		<.1
292		W		M					29167					
				M			(298.06) Py vlt 2 mm wide at 53°.					29250		
							(298.50) Vlt 1 mm wide at 31° of off-white, soft, ? clay mineral (not calcite).							
294									29474			33801		<.1
296		W		M								29550		
												33802		<.1
298									[illegible]					

HOLE NO.: E - 172 | PROJECT: | PAGE NO.: 26 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %
298							(298.80) [illegible] Late bx band 15 mm wide at 37° with pyritic matrix.		2				29850		<.1
300	W			W	py		(300.35) Py vlt 2 mm wide at 30° offset by [illegible] py vlt 1 mm wide at 122° to c.a.								
				W			(301.95 - 304.19) Somewhat to moderately broken core.								
				W			(301.20 - 301.60) Moderately brecciated.			30083			30155		
302							(302.69) Off white feldspar vlt 8 mm wide at 64°								<.1
							(303.71) Cream coloured feldspar vlt 3 mm wide at 68° offset by fractures.								
				M	py		(305.80 - 309.55) Somewhat to moderately broken core.			30327			30450		
304		W					(307.77) Watery grey, banded quartz vlt 10 mm wide at 65°			30479					<.1
							(307.87) As above: 15 mm wide at 70°								
				M			309.81 - 314.37 ANDESITE BRECCIA Grey to light grey, subangular clasts of andesite tuff and pyrophyllite tuff in andesitic matrix which is often weakly pyrophyllitized. Larger clasts to 4 cm across. 2-3% diss py with matrix			30632					
306	M									30723			30750		
308															
	M	W					(311.46) Py vlt 1 mm wide at about 10° to c.a.		2	30845					<.1
310															

HOLE NO.: K-172 | PROJECT: | PAGE NO.: 27 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %
310					py		(313.77) Py-rich (40%) band 28 mm wide at 35° to c.a. contains subround pyrophyllite masses 3 cm across. (pale grey)		2				31050		
							(314.03) As above 36 mm wide at 46°.								
							(314.92) Grey qtz vlt 6 mm wide at 24° offset across fracture at ~ about 40°.			31150					<.1
312				W			314.37 – 324.86 PYROPHYLLITE TUFF. Greyish brown to orange-brown to red-brown, fine grained. Locally faintly foliated. Weakly to locally moderately fractured throughout. Irregular patches and lenses of watery grey, soft, waxy pyrophyllite (?) throughout. More fractured and altered than pyrophyllite tuff higher in hole. Generally moderately broken core.								
		W		M									31350		
	M														
314				W						31455					<.1
				M											
				W											
				M			(316.08) Grey pyrophyllite (75%) – py (25%) irregular vlt 7 mm wide at 13°.			31546					
316				W											
				M									31650		
	M						(318.40) Py vlts up to 2 mm wide at 20°, 35°, 40°, 65°.			31668					
					py		(318.68 – 319.07) Possible fault; finely to moderately broken core.								<.1
318				M			(320.80 – 320.90) Finely broken core; possible fault.		2						
							(321.70) Faint slickensides on fracture at 13°.			31821					
				I									31950		
							(322.07 – 322.42) Moderately silicified; py masses to 4 mm across within quartz.			31973					
320				W											
				M						32140					<.1
322															

HOLE NO.: -172 | PROJECT: | PAGE NO.: 28 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: propylitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED %
322		M			py		(322.71) Irregular py bands 2 to 5 mm wide at about 80°		2	322.47			322.50		
		M			py		(322.98) Py band 15 mm wide at 40°.								
							(323.47) Py vlt 4 mm wide at 33° crosscut by py vlt mm wide at 32°.			323.69					<.1
324	W	W		W			(324.77) Py (40%) quartz (60%) vlt 9 mm wide at 25°.								
							324.86 – 329.00 ANDESITE TUFF Medium grey to locally brownish grey, fine grained with ltg. clasts average less than 2 mm across. Discrete contacts with overlying and underlying pyrophyllite tuffs, at about 40°. Less pale brown pyrophyllite within this interval, otherwise virtually identical to adjoining rock units.			325.37			325.50		
326															
		M								327.35					<.1
328		W					(326.53) Py-rich (40%) band 9 cm wide at 40°; py as irregular masses along fractures and diss.		4						
		W					329.00 – 338.90 PYROPHYLLITE TUFF: Pale greyish brown to light brown generally very fine grained, locally faintly foliated. Often weakly brecciated.						329.85		
									2						
330		W		W			(329.19) Py and quartz vlts to 10 mm wide at about 40°.								<.1
				W			(330.50) Py vlt 5 mm wide at 37°.			330.40					
				W	py		(333.77) Quartz (70%) – py (30%) vlt 3 mm wide at 22°.								
332				W									331.50		
				W											
				W						333.30					<.1
334				W											

HOLE NO.: L -172 | PROJECT: | PAGE NO.: 29 OF 39
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
334							(334.97 – 336.49) Ground core; 66 % recovery	2				33450		
	W			M			(335.60 – 336.52) Probable fault; moderately to finely broken core and mud.		33497					
							(336.82) Py (35%) and [illegible] – quartz (65%) vlt 4 mm wide at 25°			66				<.1
336	W			I			(337.10 – 338.90) Weak to moderate clay mineral alteration.		33649					
	W						(337.54 – 338.02) Moderately brecciated, 30% off-white clay mineral alteration.							
	W			M			(338.90) Py band 9 mm wide at 19°					33750		
338	W			I			338.90 – 350.30 ANDESITE TUFF Medium grey to greyish brown (about 25% pyrophyllite tuff bands) to dark grey, fine grained. Py finely diss with occasional vlts.							
	W			W				3						<.1
	W								33954					
340							(340.23) Late, fine grained breccia band about 10 cm wide at 35° to c.a. with pyritic (5%) matrix.					34050		
	M						(340.65) Fault. Pale grey mud and finely broken core 4 mm thick on fracture at 21° to c.a.		34107					<.1
342							(344.00 – 345.44) Light greyish brown pyrophyllite tuff.							
		W							34320			34350		
344												33818		<.1
									34503					
346														

HOLE NO.: [illegible]-172 | PROJECT: | PAGE NO.: 30 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION (fuchsite/silica/sericite)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
346					(347.03) Pale grey quartz v/lt 3 mm wide at 65°		3				34650		
					(347.86) Pale grey, soft, sugary mineral ^ in v/lt 15 mm wide at 40° not calcite								
348		M			350.30 – 352.31 PYROPHYLLITE TUFF As for 329.00 – 338.70								
					(350.39) V/lt. of off-white to pale brown, soft, sugary mineral (not calcite) 20 mm wide at 50°								
			g		(351.32) Py v/lt 3 mm wide at 36°.						34950		
350					352.31 – 358.06 ANDESITE TUFF Brownish grey to dak grey, fine grained generally with larger clasts to 3 mm across. Locally moderately brecciated above 355.83 with pale grey vein quartz (70%) and pyrophyllite (?) (25%) forming breccia matrix.								<.1
352		W											
		I			(352.58 – 352.95) Probable fault. Moderately to finely broken core.						35250		
	W	W			(353.62) Py v/lt 2 mm wide at 42°								
354		W			(354.10) Py v/lts to 1 mm wide subparallel c.a.								<.1
		W			(355.20) Pale grey quartz v/lt 12 mm wide at 10°.								
		M			(358.06) Contact with underlying pyrophyllite tuff discrete at 35°.								
		M											
356		W											
		M											<.1
		W											
358									2				

HOLE NO.: -172 | PROJECT: | PAGE NO.: 31 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu

DESCRIPTIVE GEOLOGY

358 — 358.06 – 362.97 PYROPHYLLITE TUFF Medium brown to greyish brown, generally fine grained with large clasts to 2 mm across. About half of interval moderately broken core. M py

(358.40) Fault. About 1 cm mud and finely broken core; probably oriented at about 15° to c.a. W

360 — (358.90) Py vlt 2 mm wide at 25°. py

(357.23) Py vlt 4 mm wide at 5°. mag

(360.98) Trace magnetite. W W py

362 — (362.32) Fault. Finely broken core.

(362.88) Hairline py vlts at ± 25° to 35° to c.a.

362.97 – 418.99 ANDESITE TUFF Dark grey to light grey to brown-grey, generally fine grained with local very fine grained sections below 386.00 m depth. Local faint banding throughout.

364 — W

(363.83) Hairline py vlts at 40-50°. W py

(365.26 – 367.07) Light grey interval containing 10 – 65 % (av. 30%) pale grey clay mineral alteration. Weakly brecciated.

366 — (366.75) Pale grey clay lines hairline fracture at 40 and 65°. W

(367.47 – 367.68) Late bx band 17 cm wide at 45° with quartz – pyrite matrix. M

(368.22) Irregular py vlt 1 mm wide at 56°.

368 — W (368.77 – 369.68) As for 365.26 – 367.07. W

(370.20 – 370.87) as above. W

(370.78) off-white feldspar (90%) – py (10%) vlt 8 mm wide at 50°

370 —

HOLE NO.: C-172 | PROJECT: | PAGE NO.: 32 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
370					py		(373.59-375.08) Brown pyrophyllite tuff; moderately broken core.		2				370.50		
							(375.08-381.07) As for 365.26-367.07 with 1-2% off-white irregular feldspar vlts up to 14 mm wide.								<.1
372							(374.98) Slickensides on fracture at 5° to c.a.			372.16					
							(375.45) Pale grey quartz vlts to 3 mm at 27°.						375.50		
							20% off-white feldspar as irregular, randomly oriented vlts over (376.37-376.47)								
374							(376.77) Off-white feldspar vlt 14 mm wide at 50°.			374.59					
				W					1						<.1
		M		W	py		(378.20-378.34) Moderately brecciated; 5% py as coarser clasts within bx and diss along fractures within matrix. Lower contact of bx at about 30°.								
376				W						377.59			376.50		
				M			(379.01) off-white quartz-feldspar vlt 2 mm wide at 47°.								
							(379.65-379.84) Late bx band with 5% diss py within matrix. Lower contact at about 50°. Few angular pyrophyllite tuff clasts, as well as andesite tuff clasts, within bx band.								<.1
378															
							(380.00) Banding at 40°.			379.17			379.50		
	W						(380.43) Off-white quartz vlt 4 mm wide at about 40°.								
380							(381.02-382.67) Moderately broken core.			380.08					<.1
							(381.49) Off-white feldspar vlt 17 mm wide at 74°.								
382	W	M								381.76					

HOLE NO.: DC-172 | PROJECT: | PAGE NO.: 33 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
382		M	W	W	py		(382.56) Fault. Pale grey mud and finely broken core 10 mm thick on fracture at 25° to c.a.		1	382.67			38250		
							(382.71) Banding at 60°.								
	W	W					(384.10 – 385.00) 5–10% spotty, ill-wide clay mineral alteration.								<.1
384	W	M	W				(384.17) Pale brown-grey quartz (90%) – pyrophyllite (10%) vlt 15 mm wide at 55°.			384.59					
	W			W			(385.78) Pale grey quartz (80%) – py (20%) vlt 18 mm wide at 45°.						38550		
386					py		(386.67) Small-scale fold axis at ~75° to c.a.								
							(386.86) As above at about 85°.								<.1
							(388.31) Py vlts to 1 mm wide at 40°.			388.71					
		W					(388.79) Fault: Finely broken pale grey core and mud on fracture at 21°		2						
388							(389.69 – 390.36) 5% bright, bluish green chlorite as irregular patches.						38850		
	M			M	py		(390.40 – 390.79) Fault. Moderately to finely broken core and pale grey mud; fracture at 40°			390.79					<.1
390	M						(393.26 – 393.86) Hairline to 1 mm py vlts throughout, at 2 to 8 mm intervals, at 40° to c.a.								
							(394.12) Pale grey quartz (95%) – py (5%) vlt 5 mm wide at 75° to c.a.						39150		
392										392.71					
													39383		<.1
394															

HOLE NO.: [illegible]-172 | PROJECT: | PAGE NO.: 34 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
394							(395.04) Py bands 3 mm wide at 45° and 70° to c.a.								
	W				py		(395.44) Py band 5 mm wide at 50°		2				39450		
							(395.72) Py band 8 mm wide at 45°			39502					
		W		W			(396.63) Py band 13 mm wide at 29°		3						
396							(395.59-395.72) Late breccia band with about 3% diss py within matrix at about 40°								<.1
							(397.67) Py band 15 mm wide at 65°								
							(398.05-398.41) Dark green hornblende- and chlorite-rich interval								
398							(398.41-398.54) Maroon; hematite-rich.			39807			39750		
							(399.00-399.21) As above -								
							(399.90) Fault. Pale grey mud and finely broken core 20 mm thick on fracture at about 30° to c.a.								
	W			W											<.1
400							(401.06-402.62) Moderately broken core						338336		
							(401.17) Fault. Mud and finely broken core 5 mm thick on fracture at 32°								
	M			W						401.11			40050		
	W						(401.65) Waxy, soft, greenish grey pyrophyllite(?) vlts to 4 mm wide subparallel and at about 70° to c.a.								
402	M			W											<.1
	M						(402.05-402.60) Moderately brecciated; local 5-10% py diss.								
	W						(402.64) Py-rich band 4 cm wide at 68°			402.94					
	W	M					(403.35-404.68) Late breccia; moderately pyrophyllitized tuff forms majority of larger clasts. Matrix pyritic								
404	M						(403.65) Off-white quartz vein 3.5 cm wide at about 50°						40550		
	M						(405.12-405.37) Moderately brecciated, with white clay matrix; band at 40°		5						
	M						(405.59-406.44) Late bx with diss py within matrix; not as pyritic as average late bx.		2	405.99					<.1
406															

HOLE NO.: L -172 | PROJECT: | PAGE NO.: 35 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
406							(405.86) Off-white quartz vein 2 cm wide at 35°.		2				40650		
	W				py		(406.94) Banding at 31° to finely								
							(409.24 – 409.41) Moderately broken core; possible fault.		1-2						<.1
408							(409.41 – 416.70) Moderately broken core.			408.12					
							(410.88) Pale grey quartz vlts 7 and 10 mm wide at 69°.								
							(411.15) Probable fault; finely broken core.								
	W	W		M			(411.62) Off-white quartz vlt 23 mm wide at 40° bordered by 3 mm wide py vlt.								
	W												40950		
410	W	W					(412.79) Py-rich (20%) band 4 cm wide at 70°.			410.10					
							(413.15) Fault. 10 mm pale grey mud and finely broken core on fracture at 45°.								<.1
				W			(415.35) Band 13 cm wide at ^ about 60°; = sugary quartz								
				W			feldspar and pyrite grains av. about 1 mm;								
412							coarser-grained bed of tuff? About 1% pore spaces.			411.78					
							(415.62 – 416.78) Late bx with pyritic matrix. Larger clasts 3 cm across. Upper contact at 60°.						41250		
										413.30					
414				M	py		(416.31) Fault. 8 mm grey mud and finely broken core on fracture at 26°.			414.22					<.1
	W						(416.47) Fault. 3 mm grey mud on fracture at 22°.		2						
	W									415.29					
	W						(417.09 – 417.35) Late bx with minor (2-3%) diss py in matrix.						41550		
416	W														
	W						(417.66) Fault. 3.4 cm finely broken core and pale grey mud on fracture at 74°.		5	416.66					
	W				py										<.1
	M			M			(418.48) Fault. 6.5 cm soft, broken core and mud on fracture at 40°.		2						
418															

HOLE NO.: EC-172 | PROJECT: | PAGE NO.: 36 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
418	M			M	py		(418.93) Fault. 7-7 cm mud between fractures at 79°. E 418.99 – 459.33 ANDES ITE. Dark green with minor green-grey sections. Medium grained; largest grains to 2.5 mm across. Massive. 3 to 10% green chlorite throughout. Contact with overlying pyrophyllitized tuff fairly sharp, discrete at about 80° to c.a. 1 to 4% pale green epidote. About 0.5% pale grey, soft pyrophyllite vlts up to 3 mm wide	2				418.50		
420				W				<1	419.70					<.1
422				M								421.50		
							(420.79) Patch pale green epidote 5 cm across.		422.75					<.1
							(421.40) Probable fault. Soft, finely broken core over 3 cm.							
424							(421.75) Fault. Mud and finely broken core 4 mm thick on fracture at about 175°.					424.50		
							(423.09) Probable fault. Finely broken core and mud at about 65°.							
							(425.63) As above at 70°.							
426							(426.21) As above at 45°.		425.80					<.1
							(426.76) Zeolite vlt 3 mm wide at 20°.							
							(427.12 – 427.29) 5% irregular, discontinuous zeolite as vlts.	<1						
428							(430.52 – 431.49) Irregular py.-quartz vlts subparallel to at about 50° to c.a.					427.50		
									428.05					<.1
430														

HOLE NO.: A-172 | PROJECT: | PAGE NO.: 37 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
430							(431.82) Orange-pink zeolite vlt 3 mm wide subparallel c.a.						33050		
							(433.90) Orange zeolite vlts 1 mm wide at 22°.								
432							(434.05 - 434.45) 2% orange zedite vlts to 1 mm at 10° and 3% pale green epidote			43190					<.1
							(435.06 - 435.30) 5% pale orange zeolite vlts at about 20°.						33350		
434							(439.15 - 439.39) 5% orange zeolite as irregular patches.								<.1
	W			M			(441.38 - 441.51) Greenish black, very fine grained magnetite-rich band at 70° containing about 1% very finely disseminated sulphide (py ?). Discrete contact with overlying andesite, almost dyke-like in appearance		<1	43474					
436	W			W									33850		
	W	W		W									33849		
438				M						43799					<.1
				M									33950		
440				M					1						
				W											
				M	MGG					44104					<.1

HOLE NO.: 72 | PROJECT: | PAGE NO.: 38 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
442					(442.20) Pale brown-grey pyrophyllite (90%) - py (8%) - orange zeolite (2%) vein 14 cm wide at 32°.						442.50		
444					(445.55) Orange zeolite vlt 3 mm wide at 15°.			444.09			2730 /		<.1
					(446.78 - 446.90) 20% pale green epidote.								
446					(447.95 - 448.86) Moderately broken core; 2% zeolite as wispy vlts and patches.						445.50		
					(453.00 - 453.30) 40% py, 20% qtz, 20% pyrophyllite, 2% zeolite within intensely bx sedim.			447.14			27302		<.1
448											448.50		
450								450.18					<.1
452											451.50		
								453.23					<.1
454													

HOLE NO.: E 172 | PROJECT: | PAGE NO.: 39 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Pyrophyll	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
454			py		(453.47) as masses to 15 mm across. 3% py					454 50		
										#27305		
456	W	W										<.1
	M						456 29					
	W											
										457 50		
458	W											
	W									#27306		<.1
459	W						459 33			459 33		
					459.33 E.O.H.							

Drill core data for hole EC-172

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
1.52	4.5	33154	49	72	240	< 0.5
4.5	7.5	33155	68	98	340	< 0.5
7.5	10.5	33156	60	126	310	< 0.5
10.5	13.5	33157	70	120	335	< 0.5
13.5	16.5	33158	20	94	135	< 0.5
16.5	19.5	33159	42	155	215	< 0.5
19.5	22.5	33160	31	121	95	< 0.5
22.5	25.5	33161	129	250	170	< 0.5
25.5	28.5	33162	23	65	115	< 0.5
28.5	31.5	33163	51	77	120	< 0.5
31.5	34.5	33164	28	68	150	< 0.5
34.5	37.5	33165	116	277	150	< 0.5
37.5	40.5	33166	41	110	100	< 0.5
40.5	43.5	33167	75	58	125	< 0.5
43.5	46.5	33168	50	94	100	< 0.5
46.5	49.5	33169	18	36	55	< 0.5
49.5	52.5	33170	21	14	60	< 0.5
52.5	55.5	33171	129	71	105	< 0.5
55.5	58.5	33172	159	113	200	< 0.5
58.5	61.5	33173	107	86	300	< 0.5
61.5	64.5	33174	99	88	425	< 0.5
64.5	67.5	33175	84	56	85	< 0.5
67.5	70.5	33176	109	45	75	< 0.5
70.5	73.5	33177	166	29	100	< 0.5
73.5	76.5	33178	161	45	60	< 0.5
76.5	79.5	33179	284	52	80	< 0.5
79.5	82.5	33180	283	19	65	< 0.5
82.5	85.5	33181	204	17	55	< 0.5
85.5	88.5	33182	426	30	90	< 0.5
88.5	91.5	33183	1045	35	115	< 0.5
91.5	94.5	33184	87	33	60	< 0.5
94.5	97.5	33185	153	46	75	< 0.5
97.5	100.5	33186	62	26	65	< 0.5
100.5	103.5	33187	233	66	100	< 0.5
103.5	106.5	33188	140	64	80	< 0.5
106.5	109.5	33189	31	38	25	< 0.5
109.5	112.5	33190	141	27	55	< 0.5
112.5	115.5	33191	86	53	40	< 0.5
115.5	118.5	33192	202	58	80	< 0.5
118.5	121.5	33193	164	55	90	< 0.5
121.5	124.5	33194	735	54	130	< 0.5
124.5	127.5	33195	564	65	130	< 0.5
127.5	130.5	33196	157	57	70	< 0.5
130.5	133.5	33197	678	59	145	< 0.5
133.5	136.5	33198	191	73	220	< 0.5
136.5	139.5	33199	318	71	260	1
139.5	142.5	33200	82	51	95	< 0.5
142.5	145.5	33201	70	53	90	< 0.5
145.5	148.5	33202	96	91	135	< 0.5
148.5	151.5	33203	41	20	85	< 0.5
151.5	154.5	33204	82	73	100	< 0.5
154.5	157.5	33205	74	94	180	< 0.5
157.5	160.5	33206	69	64	70	< 0.5
160.5	163.5	33207	24	64	50	< 0.5
163.5	166.5	33208	25	88	70	< 0.5

Drill core data for hole EC-172

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
166.5	169.5	33209	42	103	95	< 0.5
169.5	172.5	33210	28	102	90	< 0.5
172.5	175.5	33211	27	137	55	< 0.5
175.5	178.5	33212	21	75	75	< 0.5
178.5	181.5	33213	71	79	85	< 0.5
181.5	184.5	33214	143	160	95	< 0.5
184.5	187.5	33215	58	92	85	< 0.5
187.5	190.5	33216	50	65	75	< 0.5
190.5	193.5	33217	63	116	75	< 0.5
193.5	196.5	33218	82	70	60	< 0.5
196.5	199.5	33219	285	98	105	< 0.5
199.5	202.5	33220	42	86	50	< 0.5
202.5	205.5	33221	51	57	45	< 0.5
205.5	208.5	33222	106	39	75	< 0.5
208.5	211.5	33223	1400	73	75	< 0.5
211.5	214.5	33224	87	40	40	< 0.5
214.5	217.5	33225	123	71	65	< 0.5
217.5	220.5	33226	110	55	100	< 0.5
220.5	223.5	33227	221	87	120	< 0.5
223.5	226.5	33228	174	53	65	< 0.5
226.5	229.5	33229	65	43	80	< 0.5
229.5	232.5	33230	93	69	80	< 0.5
232.5	235.5	33231	232	79	150	< 0.5
235.5	238.5	33232	111	99	65	< 0.5
238.5	241.5	33233	106	70	80	< 0.5
241.5	244.5	33234	381	56	90	< 0.5
244.5	247.5	33235	350	55	145	< 0.5
247.5	250.5	33236	986	50	115	< 0.5
250.5	253.5	33237	1825	53	110	< 0.5
253.5	256.5	33238	135	56	60	< 0.5
256.5	259.5	33239	111	43	135	< 0.5
259.5	262.5	33240	151	39	95	< 0.5
262.5	265.5	33241	4860	136	280	0.5
265.5	268.5	33242	1000	145	130	< 0.5
268.5	271.5	33243	1465	89	205	< 0.5
271.5	274.5	33244	803	80	170	< 0.5
274.5	277.5	33245	573	53	115	< 0.5
277.5	280.5	33246	412	33	65	< 0.5
280.5	283.5	33247	258	33	60	< 0.5
283.5	286.5	33248	327	6	70	< 0.5
286.5	289.5	33249	460	4	75	< 0.5
289.5	292.5	33250	405	8	95	< 0.5
292.5	295.5	33801	205	5	70	< 0.5
295.5	298.5	33802	78	3	30	< 0.5
298.5	301.5	33803	136	5	35	< 0.5
301.5	304.5	33804	138	6	35	< 0.5
304.5	307.5	33805	127	5	30	< 0.5
307.5	310.5	33806	329	9	115	< 0.5
310.5	313.5	33807	111	14	50	< 0.5
313.5	316.5	33808	245	10	65	< 0.5
316.5	319.5	33809	203	10	85	< 0.5
319.5	322.5	33810	313	6	75	< 0.5
322.5	325.5	33811	154	2	75	< 0.5
325.5	328.5	33812	93	4	50	< 0.5
328.5	331.5	33813	347	5	40	< 0.5

Drill core data for hole EC-172

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
331.5	334.5	33814	47	4	20	< 0.5
334.5	337.5	33815	385	2	40	< 0.5
337.5	340.5	33816	169	2	50	< 0.5
340.5	343.5	33817	122	1	65	< 0.5
343.5	346.5	33818	91	1	40	< 0.5
346.5	349.5	33819	103	1	40	< 0.5
349.5	352.5	33820	139	5	45	< 0.5
352.5	355.5	33821	117	9	30	< 0.5
355.5	358.5	33822	69	1	10	< 0.5
358.5	361.5	33823	192	1	40	< 0.5
361.5	364.5	33824	73	7	80	< 0.5
364.5	367.5	33825	34	2	20	< 0.5
367.5	370.5	33826	45	3	10	< 0.5
370.5	373.5	33827	41	1	20	< 0.5
373.5	376.5	33828	44	3	10	< 0.5
376.5	379.5	33829	82	4	5	< 0.5
379.5	382.5	33830	258	4	30	< 0.5
382.5	385.5	33831	123	5	30	< 0.5
385.5	388.5	33832	119	2	55	< 0.5
388.5	391.5	33833	103	1	35	< 0.5
391.5	394.5	33834	37	1	40	< 0.5
394.5	397.5	33835	74	4	30	< 0.5
397.5	400.5	33836	149	1	45	< 0.5
400.5	403.5	33837	45	1	25	< 0.5
403.5	406.5	33838	131	12	80	< 0.5
406.5	409.5	33839	208	5	45	< 0.5
409.5	412.5	33840	358	3	35	< 0.5
412.5	415.5	33841	52	11	10	< 0.5
415.5	418.5	33842	134	6	10	< 0.5
418.5	421.5	33843	114	1	5	< 0.5
421.5	424.5	33844	69	1	5	< 0.5
424.5	427.5	33845	109	1	5	< 0.5
427.5	430.5	33846	133	1	5	< 0.5
430.5	433.5	33847	160	1	5	< 0.5
433.5	436.5	33848	61	2	5	< 0.5
436.5	439.5	33849	31	1	5	< 0.5
439.5	442.5	33850	38	1	10	< 0.5
442.5	445.5	27301	89	1	5	< 0.5
445.5	448.5	27302	154	1	5	< 0.5
448.5	451.5	27303	253	1	5	< 0.5
451.5	454.5	27304	128	1	35	< 0.5
454.5	457.5	27305	106	3	5	< 0.5
457.5	459.33	27306	10	1	5	< 0.5

HOLE NO.: EC 173 | PROJECT: EXPO | PAGE NO.: 1 OF 39

COLLAR ELEV.: 2014' asl | GROUND ELEV.: | DATE STARTED: MAY 11, 1990 | REF. TO CLAIM CORNER:

COORDINATES: 244,785 N. 233490 E. | DATE FINISHED: MAY 18, 1990 | SCALE: 1" = 2m

INCLINATION: 90° | BEARING: — | TOTAL DEPTH: 1497' 456.28 m | LOGGED BY: R. Husband

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL: Py	MINERAL: Cp	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED Cu%
0								0 - 2.13 - Casing								
	W	M						2.13 - 106.00 - Silica - Pyrophyllite Breccia								
2							Δ	Light to Dark grey weakly fractured breccia fragments range from mm to 3-4 cm in size in siliceous matrix.			2.13			2.13		
							Δ					83				
							Δ	Occasional hairline quartz filled and clay altered spar fractures throughout.								
4							Δ	Middle 1/3 of section contains pyrophyllite as alteration of fragments and matrix (moderate) occurs as splotches & irregular patches. Sulphide content low < 1% throughout section.			3.66					
							Δ	Lower 1/4 of section intensely silicified with abundant limonite coating along fractures.						5.0		< .1
6		M					Δ	(2.13 - 3.66) Ground core ; 83% recovery.								
		M					Δ	(2.40 - 2.85) Late stage veinlet? ≅ 1.5cm sub parallel to core & Re-brecciated quartz fragments in a light tan off white clay matrix			6.70					
		M			Py			(4.30 - 4.75) As above. Matrix is siliceous Disseminated pyrite in veinlet? original (host) breccia has limonite as hairline fractures and as patches.								
8	W	M						(4.75 - 7.00) Quartz breccia w/ pyrophyllite alteration occurring as patches (lt. brown) section looks blotchy. Limonite along fractures.		1				8.0		
							Δ	(6.10 - 6.20) Limonite along fracture sub parallel to core &			8.23					
								(7.00 - 7.05) Limonite coated fracture micro fault								
								(7.05 - 7.30) Late stage breccia fragments < 1cm in siliceous matrix with ≅ 1% dissem Py @ 30° to core &								
10					Py		Δ	(7.30 - 7.60) Quartz breccia as (4.75 - 7.00)								
							Δ	(7.60 - 8.73) Late stage breccia veinlet @ 10° to core with ≤ 1% Py		1						
	W				Py		Δ	(9.66 - 9.71) As above @ 45° to core &			11.28			11.0		
12										1						

HOLE NO.: E 173 | PROJECT: EXPO | PAGE NO.: 2 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1"=2m

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
12	w	m		w	Km	A	(9.71 - 11.90) Silica - pyroph Breccia with weak pyrophyllite alt. blotchy looking. Clasts to 4cm minor fractures @ 20-80° to core								
						A	(11.90 - 12.96) Fine siliceous breccia clasts < 1cm generally 2-4 mm								
		m				A	(12.96 - 13.80) Silica - pyrophyllite breccia. Minor pyrophyllite alt. limonite coated fractures sub parallel to core						14		
14	w	m				A	(13.80 - 16.95) Quartz breccia - intense silicification no limonite or pyrite grey & white patchy appearance.			14.32					
		I				A									
16						A	(16.95 - 17.74) Intensely silicified quartz breccia minor limonite								
		I				A	(17.74 - 22.00) Highly siliceous quartz breccia. Minor clay stringers. Occasional clasts of late stage quartz breccia near bottom of section						17		<1
18						A				17.37					
						A									
						A	(19.57 - 19.75) Quartz flooded veinlet @ 45° to core &								
20						A	83 alt.						20		
										20.42					
						A	← late stage bx								
22		m			Py	A	(22.00 - 22.70) Late stage breccia frags < 1cm in siliceous matrix pyrite disseminated in clusters 1% @ ~10° to core.								
	w	m		w		A	(22.70 - 25.10) Silica - pyrophyllite breccia patchy appearance spider web like quartz stringers, no obv. sulphides.		1				23		
24										23.32					

HOLE NO.: EC 13
COLLAR ELEV.:
GROUND ELEV.:
COORDINATES: N. E.
INCLINATION:
BEARING:

PROJECT: Expo
DATE STARTED: May 11
DATE FINISHED:
TOTAL DEPTH:

PAGE NO.: 3 OF 39
REF. TO CLAIM CORNER:
SCALE: 1" = 2m
LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
24														
		m-I			Py		(25.10 - 25.50) Late stage quartz breccia @ 12° to core ∠ quartz clasts To 3cm generally ~ 3mm in v. siliceous (qz matrix) disseminated py 1% minor hairline qz fractures at 10-15° to core.							
26							(25.50 - 26.30) Silica - pyrophyllite breccia. After 26.00m intense silica flooding clasts of late stage breccia.	1%	26.36			26		
	W	I					(26.30 - 26.49) Rehealed fault - Clay zone recemented with silica minor py <1%	<1						
		W			Py		(26.49 - 26.82) Feldspar porphyry dyke - unalterred chill margins on both contacts upper @ 45° to core lower @ 55° to core minor alt. of feldspars to clay trace pyrite dissem. 2 Stages of qtz. stringers 1st @ 10° to core 2nd @ 45° Silica halo around dyke.							
28	W				Py		(26.82 - 28.10) Silica breccia no obvious sulphides					29		<.1
							(28.10 - 28.25) Late stage quartz breccia @ 20° to core dissem py 1%		29.41					
							(28.25 - 29.41) Silica prophyllite breccia hairline qtz stringers							
30		I		W			(29.41 - 29.87) Silica prophyllite breccia with late stage quartz breccia sub parralel half the core width. Minor quartz stringers @ 45° to core.		29.87					
		m			Py		(29.87 - 31.15) Quartz breccia - intensely silicified. Hairline quartz limonite fractures (moderate) 20-45° to core.		30.78					
32	W	m					(31.15 - 32.61) Rehealed fault quartz fragments in white clay matrix.					32		
	W	m					(32.61 - 41.20) Silica pyrophyllite breccia minor hairline quartz stringers @ 45° and sub parallel to core ∠		32.61					
34		I		m					33.83					
	m											35		
	W	m							35.66					
36														

Feld. por

lt. qz. bx.

qtz stringers

HOLE NO.: E 173 | PROJECT: EXPO | PAGE NO.: 4 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1" = 2m

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
36	m	w		vw			(36.16 - 41.20) Silica pyrophyllite breccia patchy minor hairline qtz. stringers.								
38					hm		(38.24 - 38.31) 7cm clay zone - minor fault ? @ 75° to core limonite coating lower contact			38.40			38		
							7cm clay-fault qtz-lm stringer								
							(39.40) 1cm limonite stringer at 45° to core								
							(39.65) 0.3cm limonite stringer @ 45° to core								
40							(41.20 - 45.23) Late stage quartz breccia frags generally 4cm ~3mm in silica pyrite matrix pyrite disseminated to 3%						41		
		m			py		(41.45) Fracture @ 20° to core limonite envelope 1.5cm around fracture.			41.76					<.1
							late stage qtz bx								
42							(41.54 - 43.10) Fracture sub parralel to core & down center of core Half of core is rusted.		3						
	w	m					(42.53 - 46.20) Silica - pyrophyllite breccia - patchy v. minor stringers (qtz) no obv. pyrite. Gradually changes to silica breccia at bottom of section only minor pyrophyllite.						44		
44									<1						
										44.80					
46		m		w			(46.20 - 46.72) Late stage quartz breccia in silica matrix @ 45° to core. no obvious pyrite in this section. 7 hairline limonite coated fractures @ 45° to core throughout section.						47		
							late qtz bx. w/qtz-lm frac.								
							qtz-lm fmc			47.85					
48															

HOLE NO.: EC .73 | PROJECT: EXPO | PAGE NO.: 5 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1" = 2 m

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
48	w	m			Lm		(46.72 - 47.35) Silica - pyrophyllite breccia no obv. sulphides.		<1						
							(47.35 - 47.75) As above with abundant limonite limonite coated fracture @ 12° to core &								
50	w	m					py str. (47.75 - 48.85) Silica - pyrophyllite breccia patchy spider web like quartz stringers.		1				50		
		m			Py		(48.85 - 49.18) Late stage quartz breccia @ 45° to core disseminated pyrite to 1% hairline quartz stringers @ 80° to core.			50.90					
52	w	m			Py		(49.18 - 63.50) Silica - pyrophyllite breccia abundant silicification minor pyrite sub parallel pyrite stringer						53		<1
							(49.75 - 50.20) Occasional pyrite stringers 10-20° to core			53.95					
54															
56							py str			57.00			56		
58															
60							py str						59		

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 6 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1"=2m.

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60						Δ				60.04					
62						Δ	(63.50 - 66.68) Silica breccia @ 20° to core (upper) quartz fragments to 3cm in siliceous matrix. Pyrite disseminated AND Along fractures 3% 5-7% py @ (63.50 - 63.60) AND (65.60 - 65.85) spider web-like quartz stringers.		3	63.10			62		
64		m		w	Py								65		
66		m		w	Lm		(66.68 - 67.55) Silica breccia quartz flooded abundant limonite (v. rusty appearance) along fractures & in matrix. (67.55 - 69.04) Silica breccia. minor fractures pyrite to 3%			66.14					<1
68		m		w	Py		(69.04 - 69.37) Fault - Ground core abundant clay-gouge.		<1				68		
70	w	m		w	Py		(69.37 - 72.47) Silica - pyropyllite breccia dark grey weak pyroph. ALT. Clast generally <1 cm. minor fractures quartz AND limonite coated @ 45° to core. minor disseminated pyrite. not patchy as other silica - pyroph. breccia. ← fault. 3cm band of late stage qtz. breccia @ 71.50 m @ 45° to core ← 83-1m str.		3	69.04			71		
72						Δ			1						

HOLE NO.: EE-173 | PROJECT: EXPO | PAGE NO.: 7 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1" = 2m.

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
72	w	m		w		Δ	(72.47 - 78.90) Silica pyrophyllite breccia - patchy blotchy no obvious sulphides. Spider web like qtz stringers sub parallel limonite coated fracture @ 76.47m			72.08					
74						qz str.							74		
						Δ				75.13					
76						qz lmstr.									
									<1%				77		<1
78						Δ	(78.90 - 80.43) Silica - pyrophyllite breccia with qtz. veinlet sub parallel to core. 1/2 is quartz minor limonite fractures, other 1/2 is silica - pyroph breccia.			78.33					
	w	m		w	lm										
80						qz vlt. Δ	(80.43 - 80.52) Late stage quartz breccia in siliceous matrix trace disseminated pyrite @ 25° to core &						80		
		m			Py		(80.52 - 81.74) Silica - pyrophyllite breccia - quartz stringers and 5cm band of late stage quartz breccia @ 25° to core & @ (80.60m - 81.06)			81.38					
	w	m				lt qz bx									
82						Δ	(81.74 - 82.24) Late stage quartz breccia @ 25° to core & minor pyrite minor limonite								
		m											83		
84						Δ									

HOLE NO.: EC-113 | PROJECT: EXPO | PAGE NO.: 8 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
84	w	m					(82.24 - 89.22) Silica pyrophyllite breccia. Clasts generally ~3 m.m. minor pyrite very few fractures Quartz cemented. minor limonite (along fractures @ 10° to core ∠)			84.43					
86							silic pyroph bx w few frac. 10°						86		
										87.48					
88		I			Lm		(89.22 - 89.70) Silica breccia Quartz flooded breccia zone @ 40° to core almost entirely silica minor limonite along fractures @ 10° to core.			89.00			89		
							93 flooded (89.70 - 91.92) Silica pyrophyllite breccia. blotchy no obv. sulphides minor quartz - limonite stringers 0-15° to C.A.		<1						∠1
90	w	m					(91.55 - 91.92) Late stage quartz breccia @ 40° no obv. sulphides			90.50					
							93 lm. stringer								
		m					(91.92 - 102.60) Silica pyrophyllite breccia As FOR 89.70 - 91.92 limonite coated fracture sub parallel to C.A. @ (91.80 - 92.10)								
92	w	m-I			Lm		Gradational change to quartz flooded breccia with limonite fractures in web like manner. no sulphides seen Vesicales below about 98.57, to 3 mm across.						92		
							↗ correct term - vugs probably better			93.27					
94															
							lm. coated frac.						95		
										95.86					
96															

HOLE NO.: EC-173 | PROJECT: Expo | PAGE NO.: 9 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1" = 2m

INCLINATION: 090 | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
96															
98							vugs			98.91			98		
100	w	m	i	w	Py		(102.60 - 106.00) Silica pyrophyllite breccia quartz flooded (late stage) abundant pyrite in matrix and As stringers sub-parallel to 30° to C.A. to 15% in places. py stringer						101		
102							py str			102.41					<.1
							py str.						104		
104	w	m					(106.00 - 106.59) Feldspar Porphyry Siliceous speckled dyke trace pyrite disseminated. Contains clasts of surrounding breccia to 4c.m. siliceous envelope around dyke. py str.		8	105.41					
106		m		w	Py		(106.59 - 391.37) Quartz breccia (pyrite) Dark grey angular quartz clasts to 5cm wide in silica-pyrite matrix. Pyrite also As stringers to 15% Unit contains veinlets of late stage quartz breccia feld. por late qz bx.		<1				107		
108									10 → 15						

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 10 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
108							AVE CORE REC'Y / HOLE							
	w	m		w	py	late qtz bx	in creamy colored quartz matrix. Pyrophyllite alteration in parts - minor breccia is very angular in appearance never blotchy AS previous unit. Unit contains 10-15% pyrite AS veinlets AND disseminated in matrix.	10-15%	108.51			110		
110		m			py		(107.12 - 107.51) Late stage quartz breccia @ 35° minor pyrite							
		m			py		(107.51 - 107.73) Quartz breccia in quartz - pyrite matrix pyrite stringer @ 45° AND 10° clasts are <1cm generally ~ 3mm.	15	111.56					
112		m			py		(107.73 - 108.69) Late stage quartz breccia sub parallel to core creamy color only minor Py <1% ½ width of core rest of core is quartz breccia with abundant dissem py.					113		<.1
		m		w	py		(108.69 - 122.48) Quartz breccia abundant pyrite AS disseminations AND Fracture filling AND Along grain boundaries occasional clast? of late stage breccia Py stringers @ 45°	15	114.60					
114							py str.							
						late qtz bx / qtz vlt } 2% py						116		
116		m			py		(116.60 - 116.68) Late stage qtz breccia @ 45° to core to 2% dissem py	2	117.80					
		I			py		(116.68 - 116.76) Quartz vein @ 45° with ~ 2% dissem Py.							
118							py str.	15				119		
120														

HOLE NO.: E-173 | PROJECT: EXPO | PAGE NO.: 11 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120															
							py str.		15	121			122		
122		w			Py		(122.48 - 122.81) Semi massive pyrite. banded appearance pyrite AND quartz grains @ 45° to C.A.		30						
							semi msv. Py 2mm pyrite bands spaced 4-5 mm apart looks almost bedded.								
							(122.81 - 127.71) Quartz - pyrite breccia as above			124.05					
124		m		w	Py				15				125		2.1
							py str.								
126										127.1					
							(127.71 - 127.92) Quartz vein @ 45° to C.A. No obvious sulphides								
							93 vlt.						128		
128		m			Py		(127.92 - 135.70) Quartz - pyrite breccia		15						
130										130.15					
													131		
132															

HOLE NO.: EC-113 | PROJECT: EXPO | PAGE NO.: 12 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11 /90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90 | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
132						Δ									
							(135.70 - 137.00) Late stage quartz breccia. Cream coloured qz matrix @ 12° to C.A. - Siliceous with minor py dissem towards bottom are clasts of quarty- pyrite breccia.		15	133.20		134			
134		m			py	Δ									
						Δ	(137.00 - 138.30) Silica breccia qtz. fragments in quartz flooded matrix minor hairline qz. fractures no obvious sulphides. Gradational contact on both ends			136.24					
136		I		w			late stage qz bx.		2			137			2.1
	W	m					(138.30 - 139.61) Silica - pyrophyllite breccia. Small clasts ~ 3-4 mm in siliceous matrix. No obv. sulphides			139.20					
138						Δ									
		I			km		(139.61 - 140.47) Silica breccia qtz. flooded with minor limonite coated fractures giving it rusted look.					140			
140	W	m		w	py	Δ	(140.47 - 147.20) Silica - pyrophyllite breccia clasts < 1cm. weak pyroph Alt. Disseminated py and py stringers to 3mm @ 45° to C.A. to ~ 1%								
							py str.								
142						Δ	Web like qtz. stringers		1	142.34					
							qz str.								
							py str.					143			
144						Δ									

HOLE NO.: EC 13 | PROJECT: EXPO | PAGE NO.: 13 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
144						Δ									
						py str.				145.39					
													146		
146						q3 str.	(147.20 - 158.70) Quartz breccia (pyrite) late stage includes clasts of surrounding rock. re brecciated matrix is quartz and pyrite. Pyrite also as stringers total py 3% very few fractures weak pyrophyllite alteration.		1						
	W	M			P_Y	Δ									
						5mm py vnlt.			3	148.43			149		∠.1
148						(148.79)	5 mm pyrite veinlet @ 20° to C.A.								
						Δ									
						(150.93)	2mm pyrite veinlet @ 20° to C.A.			151.48					
150						2mm py vlt.									
													152		
						(152.72)	15 mm clay - limonite fault ? fracture with 14cm. argillic alt. Halo bleached.								
152						Δ									
						(153.05)	2mm pyrite veinlet @ 80° to C.A.								
						1.5 cm fault.									
						2mm py vlt.									
						(153.23)	2 mm pyrite veinlet @ 08° to C.A.			154.53					
154						py str.									
						(153.62 - 153.83)	Sub parallel quartz stringer no obv. sulphides								
						py str.									
						(154.46)	5mm pyrite stringer @ 45° to C.A.						155		
						rehealed fault									
156															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 14 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
156		w			py	Δ	(155.27-155.35) Reheated fault? @ 40° to C.A. Brown clay zone with slight silicification. Has fine banded appearance. Pyrite disseminated throughout. 5cm below core is resilicified.		3						
						Δ				157.58			158		
158	w	m			py		(158.70-173.20) Quartz breccia with pyrite rich matrix with sections of silica pyrophyllite breccia up to 35cm. wide totalling ~ 25% of core. Contacts are not well defined.		—						
							py str. Pyrite content ~ 3% but increasing in certain sections. Minor fracturing. A few stringers of quartz and		1						
160						Δ	(158.70-159.00) pyrite quartz breccia in siliceous matrix minor py		2						
							(159.00-159.30) Silica-pyrophyllite breccia contact sharp @ 80° pyrite content ~ 2%		3	160.63			161		
							py str.								L.1
162							(159.30-161.90) Quartz breccia As above ~ 3% pyrite 3 pyrite stringers < 3 mm wide @ 30-45° to C.A.		—						
									2						
						Δ	(161.90) 2mm pyrite stringer @ 15° to C.A.		2	163.67			164		
164							(161.90-162.20) Silica-pyrophyllite breccia - blotchy pyrite to 2% contact with upper unit is pyrite stringer								
						Δ									
166										166.74			167		
168															

HOLE NO.: EC 13 | PROJECT: EXPO | PAGE NO.: 15 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11 '90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1" = 2m

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
168						Δ									
170						Δ			3	169.77			170		
172		W		wly		Δ	(173.20 - 186.46) Quartz breccia in a clayey matrix. Sharp angular fragments. Minor disseminated pyrite. Very few fractures. limonite coating of fractures AND along grain boundaries in sections up to 10 cm wide < 10% of total core. Located around small faults and fracture zones.			177.82			173		< 1
174						Δ			1	175.97					
176						Δ	(177.02 - 177.15) Limonite zone 3 fractures @ 65° to C.A.						176		
							(178.92) Broken core - fault limonite zone 10 cm adjacent. 1m coated fract.								
178						Δ				178.92					
							broken core - fault.						179		
180						Δ									

HOLE NO.: EC .3 | PROJECT: EXPO | PAGE NO.: 16 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
-180							(180.51) - finely broken core - fault limonite 5cm. adjacent fault.								
						Δ				181.97			182		
-182									1						
-184						Δ				185.01			185		L-1
-186	W	M		W	Py		(186.46 - 195.77) Quartz breccia in pyrite rich matrix with pyrite stringers. Pyrite content 4-7% Occasional silica - pyrophyllite breccia sections up to 35cm wide. Less than 25% of total core pyrite stringers @ sub parallel, 20°, 45°, 80° to c.A.								
							py str.			188.00			188		
-188						Δ	py str.								
							(188.75) 2 mm pyrite stringer @ 20°		7						
-190							py								
						Δ				191.11			191		
-192							py								

HOLE NO.: EC 73 | PROJECT: EXPO | PAGE NO.: 17 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
192						Δ									
									7	193.70			194		
194						D	(194.60 - 195.11) - Subparallel pyrite stringer								
							py str. (195.77) - 1mm pyrite stringer @ 80°		4						
	W	M		W			py (195.72 - 205.72) Silica breccia. Siliceous fragments in a quartz ground mass. No obv. sulphides. minor fractures pyrite along occasional fracture and as irregular masses py content <1% Faults occur throughout section with clay associated with them. Altered feldspar porphyry dykes up to 50 cm wide occur adjacent to faults in some areas.			196.75			197		<.1
196						Δ									
198							(198.10 - 198.70) Clay alteration around a fault at 198.36 m 6 cm wide @ 55° to core		<1						
							clay alt. fault			199.80			200		
						Δ									
200							(200.17) - 5 cm clay zone - fault @ 45° to C.A.								
							fault. (200.55) - 3 cm clay zone - fault @ 40° to C.A.								
						Δ				207.84					
202													203		
						Δ									
204						Δ									

HOLE NO.: EC-[illegible].3 | PROJECT: EXPO | PAGE NO.: 18 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11 /90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
204						Δ	(205.59 - 205.72) Fault - finely broken core. Fractures immediately above @ 30° to C.A.							
						fault	(205.72 - 206.48) Altered feldspar porphyry. Minor clay alteration of feldspar phenos. 3-5 mm in size. no obv. sulphides sub parallel fracture throughout. Both upper & lower contacts are faults.		206.04			206		< .1
206	w													
						feld por. fault	(206.48 - 206.54) Fault - clay zone @ 60° to C.A. Below is silica breccia.							
						pl str.	(206.54 - 210.00) Silica breccia with weak pyroph. alt. in upper 1.0 m. Sub parrallell fracture (207.35 - 207.95) Bornite noted (207.25 - 209) Bright blue 12th (acicular) actls. Pyrite occurs as disseminations and along grain margins generally < 1% matrix dark grey. Breccia's reheated frags < 5 mm in v. siliceous matrix	1	209.09			209		.15
208	w	m												
						Δ								
210							(210.00 - 210.40) Altered feldspar porphyry as above (205.72 - 206.48)							
						feld por	Fault @ 210.16 m @ 30° to C.A.							
							(210.40 - 212.14) Silica breccia in cream colored siliceous matrix. Matrix shows gradual change to dark grey (210.77 - 210.97) Then back to cream colored. Cream color next to feldspar porph. dyke.		212.14			212		< .1
212		m				Δ								
						feld por.	(212.14 - 212.57) Altered feldspar porphyry dyke @ 60° to C.A.							
						Δ	(212.57 - 227.50) Silica Breccia as (195.77 - 205.72)							
214		m					(212.57 - 215.43) Silica breccia in light brown siliceous matrix pyrite content < 1%.	< 1	215.19			215		
		m				Δ								
216														

HOLE NO.: EC-173 | PROJECT: Expo | PAGE NO.: 19 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
216		m			py	Δ	(215.43-219.00) Silica breccia in grey siliceous matrix disseminated py 1-2%		2	218.08					
	w	m		w	lm	Δ									
218						Δ	(219.00-227.57) Silica bx. quartz flooded minor <1% py. hairline limonite stringers throughout 15° to C.A. (223.00-224.44) is silica-pyrophyllite bx. blotchy			221.28			218		
220						Δ	lm stringers		<1				221		<.1
222										224.49					
		m		w	py	Δ							224		
224										227.69					
226						Δ	limonite stringers (227.57-231.25) Quartz breccia in pyritic matrix pyrite disseminated & along fractures to 8%								
						Δ							227		
228									8						

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 20 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE: 1"=2m

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
228						Δ			8	230.73					
230						Δ	(231.75-262.60) Silica breccia - quartz clasts - generally < 4mm in siliceous matrix v. few fractures @ 45° to C.A. v little pyrite minor sections of quartz breccia in silica - pyrite matrix as noted below. Gradational changes to sections of pyrophyllite alteration.						230		
232		m	i	w	Py					233.63			233		<.1
						Δ			<<1						
234							(234.50) Pyrite stringer 1mm @ 10° to C.A. py str.			234.68					
							(235.60) Pyrite veinlet 4mm @ 10° to C.A.								
							(235.80) Limonite coated fracture @ 20° py vlt.						236		
236							lm. frac.								
										239.73					
						Δ	(239.80-239.88) Quartz flooded section little breccia texture left. @ 80°								
238						Δ	(239.88 - 240.10) Silica breccia frags. to 3cm. avg. 4mm coarser than surrounding @ 80°						239		
240															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 21 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240						Δ	(240.70) 2mm py stringer @ 25°								
							py str.								
242						Δ							242		
		m		w	Py		(243.11 - 243.28) late stage quartz breccia in cream coloured gtz matrix.								
							late stage @ 75° to C.A.			242.77					
							83 bx								
244						Δ							245		
							(244.70) Breccia fragments become coarser >4mm		1						
		m			Py		(244.70 - 252.07) Py stringers become more abundant (1 every 4-5cm)			245.82					2.1
						Δ	less than 2mm wide								
246															
						Δ									
							py str.								
248						Δ			<1	249.02			248		
						Δ									
250															
							py str.								
						Δ							251		
252															

HOLE NO.: EC 13 | PROJECT: EXPO | PAGE NO.: 22 of 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Graphyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
252										252.07					
							py str.						254		
254		m			py		(254.71 - 255.31) Quartz breccia in pyrite rich matrix pyrite content ~ 7%		1						
										255.42					
									7						
256							py str.						257		
										258.17					
258							py str		1						<1
													260		
260										261.21					
262					py		(262.60 - 263.74) Altered feldspar porphyry dyke upper contact - fault @ 045° lower contact @ 45° - gradational v. few fractures. Disseminated py to 3%			263.65			263		
							z feld por.		3						
264															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 23 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 11/90 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
264	w	m			Py	Δ	(263.74 - 266.10) Silica breccia quartz flooded weak pyrophyllite alt. pyrite in stringers trace disseminated total ~ 1% Fine quartz stringers @ 45° to C.A. 93-py str.		1	266.10			266		
266	w	m			Py Bo Mo	Δ	(266.10 - 271.50) Silica breccia in v. siliceous matrix pyrite stringers, bornite? stringers disseminated py, bo, mo Total sulphide to 4% weak pyrophyllite alteration in upper 1.5 meters then into silica alt. - flooding py str. 93 vlt w/py bo		4						.15
268						Δ	(267.46) 1mm py stringer @ 40° py str. (267.57) 2mm qtz veinlet with py and Bo along margins @ 45° (268.17) 3mm py veinlet @ 30° (268.50) 1.5mm pyrite stringer with Bo along edges			269.70			269		
270						Δ	(271.50 - 272.48) Quartz flooded zone v few fractures v. little sulphides <1% As disseminations And fracture fillings								
							(272.48 - 286.20) As (266.10 - 271.50)								
272		m		w			(273.98 - 274.08) Late stage qtz breccia in cream matrix @ 20° Py Bo As irregular - dendritic patches		1	272.80			272		
		m			Py Bo	Δ	late stage 93 bx (274.57) 2mm Py stringer @ 20° py str.		4	274.62			275		
278						Δ									

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 24 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
276							(277.74) 3mm pyrite stringer @ 30°			277.67					
278	w	m					z py str. (278.00 - 278.45) Weak pyrophyllite alt. (blotchy) in breccia		4				278		.15
							(278.80 - 278.90) Late stage qtz. breccia in cream matrix @ 55°								
							z lt. stage qtz brx (279.64) 3mm pyrite stringer @ 70°			280.72			281		
280							z py st (280.50 - 280.59) 4 - 2-4 mm py stringers @ 40°								
							z Py str.								
	m	m					(282.05 - 282.17) Quartz - pyrophyllite veinlet @ 63° Brown clay with quartz fragments in siliceous matrix								
282							z qtz pyroph vlt.								
	m	m					(282.61 - 283.33) Moderate pyrophyllite alt. of breccia mostly of matrix			282.77			284		
							z lm str. (283.14 - 283.50) Sub parallel limonite stringer								
		m			Py Bo		(283.50 - 286.20) Quartz breccia in sulphide rich matrix. Pyrite & bornite. As disseminations AND along fractures and grain boundaries to 8% (See sample)*		8						.3
284							bornite								
286							(286.20 - 293.59) Quartz flooded zone Weak fracturing limonite coating on fractures V. fine web like sulphide content <1%			286.82			287		
	w	mI		w	lm		z web like qtz str. (287.41) Limonite coated micro fault @ 70°		<1						.1
288															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 25 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Graphyllite / Silica / Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
288													
								289.86					
290	I	W	Lm		lim frac. (290.07) limonite - clay fracture @ 45° clay Alt. down to 290.13						290		
			Lm		(290.50 - 290.70) Broken core limonite and clay on fracture surfaces		<1						.1
292				late 83 bx.	(292.14) 1.2 cm late stage quartz breccia in creamy matrix veinlet @ 45°			292.61			293		
	mI		Py Bo		(293.59 - 319.43) As (266.10 - 271.50)								
					(293.59 - 294.31) weak prophyllitic alt.								
294	W	M	Py Bo Mo	Py, bo, mo str.	(294.31 - 295.56) Silica flooded breccia As (266.10 - 271.50) Hairline pyrite AND bornite? moly? Fractures @ 45° AND As discontinuous fractures.		4						
				micro fault	(295.56) 4 cm Clay (micro fault) @ 80° to C.A. rehealed			295.96			296		.2
296					(297.07) 2 cm micro fault @ 80° - rehealed								
				micro fault									
	W	M	Lm		(298.39 - 298.85) Limonitic coating of stringers with weak clay alt. → alteration zone around fault.		1						
298			Py	fault	(298.67 - 298.80) Fault - broken core @ 75°			299.91			299		
			Bo				5						
300													

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 26 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 40° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Chlorite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300															
		m		w	Py Bo		(301.46 - 302.04) Sub-parallel Fracture minor pyrite coating		5						
							Py coated fr.			301.90			302		.2
302							(302.717) - Pyrite quartz veinlet with lesser bornite @ 60°								
							Py-bg-bo str.			303.12					
							(302.90 - 303.20) Broken core possible fault								
							broken core fault?								
					Py		(303.92) 3cm zone of 4 pyrite stringers @ 15°-45° weblike						305		.15
304							web like py str.								
							(304.84 - 305.06) Brokencore possible fault								
							fault?			306.02					
							(306.30 - 306.78) Broken core possible fault								
306										306.78					
							fault?						308		
							(307.69) Pyrite stringer 3mm @ 45°								
					Py										
					Bo		py str.			309.37					
308					Mo										
							(309.43) 3mm Py-bo stringer @ 30°								
							py-bo str								
310										310.94			311		
312															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 27 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
312		m			Py Bo		(312.60 - 313.00) 5-7% dendritic pyrite and bornite in silica breccia		7						
							Z py bo.								
										313.94			314		
314							(314.54 - 314.72) Broken core - possible fault @ 60°		4						
							fault (315.34 - 315.50) Pyrite - Quartz stringer zone @ 20°								
							Z py-qtz str.								
										316.08					
316							(317.00) Micro fault @ 30°						317		
							(317.45) 3mm Py veinlet @ 30°								.2
							Z micro fault								
							Z py str.								
318										318.21					
							(319.43 - 323.12) Silica - Pyrophyllite Breccia, blotchy pyrophyllite abundant limonite 5% along fractures. Most fractures @ 20° fault @ 320.54 m @ 45° 3cm wide								
	m	m	m	Lm			Clay zone.						320		
							Z lm frac.								
320							(321.50 - 321.74) Broken core - possible fault			321.24					
							Z fault								
							(321.74 - 375.65) Silica breccia - Quartz cemented very little texture remains, light - dark grey colour Weakly fractured - web like pyrite, moly and bornite? Along fractures and as disseminations Sulphide content to 7%		1						
		m		w	Py Mo Bo?										
322							web like Py-bo-mo str		7	323.09			323		
							fault								
324															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 28 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
324						Δ	(323.68 - 323.91) Broken core								
		m			Mo Py		fault								
							(324.85 - 325.22) Broken core - Mo, Py, Bo noted		7	325.22					.2
		m					Mo, Py, Bo						326		
326							(325.54 - 325.83) 1mm Sub parallel Py stringer								
							py str.								
					Py	Δ	(327.86) 3x 1mm Py Bo stringers @ 50°								
					Bo		(328.71 - 330.00) Weak pyrophyllite alt.								
	w	m					(329.09 - 329.30) Broken core			328.27					
328							py - bostr.						329		
						Δ	(329.46 - 329.71) Broken core								
					Py		broken core								
		m			Bo					330.71					.2
330						Δ									
							(332.00 - 332.10) Ground core - fault						332		
							fault								
332															
						Δ	(333.82) 15 mm Py - Qz veinlet @ 80°			333.30					
							Py Qz vlt.								
334													335		
							py - bo str.								
						Δ	(334.05 - 334.13) 5% pyrite, bornite stringers @ 80°								
336															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 29 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

ALTERATION: Pyrophyllite, Silica, Sericite | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
336		336.35					
	7				338		
338		339.39					.15
340		340.72			341		
342		343.51					
	5				344		
344		345.95					
346					347		
348							

W

Py

Mo Py Bo

(336.28 - 336.90) Weak pyrophyllite alteration (blotchy)

(336.90) 5mm pyrite quartz stringer @ 45°

py str.

Mo

(337.70 - 337.93) Mo noted!

py str.

(338.31 - 338.75) 2mm Sub parallel pyrite stringer

fault

(338.80 - 338.91) Broken core

Fractures in core @ 10 - 20°

(340.69) 2mm pyrite stringer @ 60°

Lesser bornite

py str.

Core is 83 flooded silica bx. v. few fractures

Py Bo Mo Dissem, & Along grain boundaries

v. undifferenciated core.

dissem py-bo

(344.05) 2mm Mo? Bo? (Dark grey) + Qz + Py stringer @ 75°

83-py, mo, bo str.

(346.45 - 346.62) Broken core minor clay - possible fault.

fault

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 30 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
348							(348.80 - 348.87) Broken core		348.84					
	W	M			Py Bo Mo		(348.84 - 351.89) Minor pyrophyllite in core							
							py-bo str. Sulphide (Py Bo) stringers @ 70 - 80°					350		
350							And as dissem	5						
							(351.44) 2mm Py stringer @ 45°		351.89					.15
							py str.							
352							(352.09 - 352.13) Py + Qz + Bo (Tr) Veinlet @ 65°					353		
							py-qz vlt.							
									354.63					
354														
							(356.09 - 356.62) Broken core					356		
356							fault		357.23					
358														
												359		
									359.36					
360														

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 31 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Chlorite	Silica	Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360		m					(359.36 - 360.24) Broken core		5	360.88					.15
					Py	Δ	(360.06 - 360.24) Pyrite clay zone probable fault pyrite to 30%								
	w						30% Py						362		.1
362							(360.47 - 360.65) Pyrite - clay zone @ 75° pyrite ~ 10% Lesser bornite & moly in core		7	362.10					
					Py	Δ	(361.06 - 361.25) Pyrite to 30% @ 30° upper contact 60° lower contact								
364		m		m	Py Bo		(364.80 - 365.22) Broken core - sub parallel fracture increased sulphide content to 10 %			364.54					
							Py on frac. (364.52) Pyrite coated fault @ 45°						365		
							fault								
		m		m	Bo Py		(364.52 - 365.34) Broken core moderately fractured Disseminated Py + Bo			366.31					
366						Δ									
							(367.80 - 368.00) Ground core - fault gouge @ 20°		10						
						Δ	(368.08 - 368.20) Broken core with Mo, Bo, Py on fracture surfaces Moly along fractures associated with faults bornite & pyrite disseminated & along fractures								
					Py Mo Bo					368.20			368		.2
368							fault mo in fault								
						Δ	(369.03) Moly along fracture @ 45°								
							mo coated frac.								
		m			Mo		(369.21 - 369.36) Broken core - clay fault @ 75°								
370							fault								
							95 Py str.			370.03					
							(370.03) 2 cm quartz veinlet @ 80° with pyrite								
													371		
							(370.03) → Several late stage quartz veinlets.								
372															

HOLE NO.: EC 173 | PROJECT: EXPO | PAGE NO.: 32 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
372		I		W	Py Bo Mo	Δ	(371.49 - 372.68) Intensely silicified breccia			372.47					
						qtz vlt.	Quartz flooded zone								
							(373.14) 4 cm. qtz. veinlet @ 60°								
374	W	M					(373.00 - 373.45) Weak clay alt. of matrix yellowish cream colour		10				374		.2
						qtz	(373.79) 2 cm quartz veinlet @ 45°								
						Δ	(373.72)* Chalcopyrite speck noted			375.67					
					CP										
						qtz Py vlt.	(375.65) Quartz veinlet with pyrite 2 cm @ 20° to C.A. Acts as contact with underlying unit.		—				377		—
378							(375.65 - 379.17) Silica breccia								
	W	M		W	Py Cp Hm Bo		with late stage quartz veinlets @ 65-80° (.3 to 5 cm)								
						qtz vlt	(density 1 per 5cm) Rock is red & green in colour due to		7	378.26					.25
380						qtz vlts	hematite [overall 8-10% Locally up to 30%] and green								
							clay mineral hematite is specular with metalic luster &								
							along fractures. Chalco and bornite also as disseminations						380		—
							Sulphide content ~ 7% Hematite late stage								
							(379.17 - 391.37) Into silica breccia as before 375.65 with occassional			379.63					
		M		W	Py Bo? Mo		band of hematite rich bx.								
382						Δ	(337.37) 5cm quartz veinlet @ 45° with py & Hm along fine								
							fractures within quartz.								
						qtz vlt.									.15
							(380.13 - 380.38) Hematite rich band @ 45°								
						qtz - py vlt.									
384							(380.88 - 381.07) Quartz vein @ 45°			382.52					
						Δ							383		
							(381.50 - 381.89) Quartz vein @ 55° Py, Mo fractures								
386		I													

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 33 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Prophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
384		m		w	Py	Δ	(383.34 - 383.84) Hematite rich band @ 65° Hematite content 8-10%								
							(385.68 - 385.72) Broken core		7	385.72			386		
386						Δ	broken core								
388	w	m				Δ	(388.50 - 388.93) Weak prophyllite alt.			388.77			389		.15
							(388.60) 83 Py vlt. - 2.5 cm Quartz veinlet @ 80° with disseminated pyrite								
390						Δ	(391.20) - 2cm. quartz veinlet with pyrite & chalcopyrite along fine fractures within veinlet.								
		m			Py Cp		(391.37-456.28) ANDESITE light to dark green colour			391.82					
392		w		m	Py Mg		broken core		2				392		
							fault			393.04					
							fault								
							fault								
394							with late stage quartz veining and flooding of groundmass almost brecciated in sections as result of late stage quartz. Faults are common throughout section. Upper contact is fault. Bands of silica breccia (Overlaying unit) occur throughout section - less than 15% of section Pyrite and magnetite occur as irregular disseminations and along fracture surfaces. Content Py & Mg ≤ 2% PROPYLLITIC (CHL, EP) Alteration - moderate throughout. Weak to mod. clay alteration.						395		
396															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 34 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
396							COMMENTS: AVE CORE REC'Y / HOLE							
	w	w		w	Py Cp mg		93 vlt Py, cp Grain size variable - Fine to medium trace chalcopyrite	2	396.24					
							(391.37 - 392.25) Broken core Fault at upper contact @ 70°	1						
							fault Recovery 80%					398		
398							(392.67 - 392.84) Fault gouge @ 75° clay zone with minor pyrite	2						
							(393.04) 5cm Fault gouge @ 45°							
							(396.40) 1.5cm qtz. veinlet @ 45° w/pyrite, chalco, hematite		399.29					
							(396.77) "							
							(396.92) "							
400					Py Cp		(397.10 - 397.35) Silica breccia					401		
							(397.37) 3cm fault gouge @ 80°							
							(401.02 - 401.10) Fault gouge @ 70°							
							(401.20 - 401.27) "							
							fault		402.34					
							(402.83) 1 cm Fault gouge @ 45°							
402							(404.30 - 414.10) Silica breccia							
							Quartz flooded dissem Py & Cp							
							fault v few fractures					404		
404		m			Py Cp				405.38					
							dissem Py cp	7						.2
406														
									407.21			407		
408														

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 35 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
408		m			Py Cp		(408.04 - 408.54) Sub parallel fracture			409.80					
							(410.06 - 410.47) Broken core - fault zone, upper contact @ 55°						410		
410							fault (410.57 - 410.69) White clay coated fracture @ 20°		7	410.57					
							clay coated fract (411.74) 1 cm. Clay zone @ 50°			413.46					.15
412							(414.27) 1 cm. Quartz veinlet @ 50°						413		
							83 vlt (414.43 - 414.57) Abundant clay alteration Crumbly core		—						
414							(416.97 - 418.00) Fault zone @ 45° Re healed quartz-clay breccia zone			415.90			416		
416							(419.20 - 419.66) Sub parallel pyrite stringer 2-3 mm		2						
							fault zone								
418		W			Py Mg		(419.72 - 419.83) Quartz veinlet @ 45° 3cm wide adjacent to fault @ (419.80)			418.95			419		
							83 fault 83								
420															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 36 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420						V									
					Py	V				422.00					
422		W			Mg	V	(423.90 - 424.75) Clay alteration - brecciated andesite in clay matrix. Fault zone?						422		
						V				425.04					
424							fault						425		
					Py		(424.72) 1 cm. fault gouge @ 80°								.15
						V	(425.10 - 425.37) 4 cm quartz vein @ 20°								
426						V	Pyrite along fractures within vein		2						
						V				428.09					
							(427.55 - 429.30) Ground core - fault zone @ 25° to C.A.						428		
428							fault zone		1						
					Mg					431.14					
430					Py	V			3				431		
						V									
432															

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 37 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: 90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
432						V	(432.72) 2 cm fault gouge @ 75°								
						Z	fault								
						V	(434.60 - 435.83) Light brown Clay altered moderately siliceous andesite		2	434.34			434		
434		m		W	Py Mg										
						V	(435.83) Minor fault - slickensides pyrite content increases below								
		m													
						V									
436										437.54			437		
		m			Py	V	(437.00 - 437.18) 3cm quartz veinlet @ 20°		4						.15
						Z	93-vlt								
438		m			Py	V	(440.81 - 441.73) Fault zone - broken core @ 20°								
						V				440.59			440		
440															
						V	(442.44) Minor fault gouge 4cm								
						Z	fault zone			441.96					
442															
						V	(443.48) 1 cm quartz veinlet with pyrite? chalco @ 20°						443		
					Py	V									
					Cp	Z	93-py-cp-vlt.								
444						V									

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 38 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
444						V									
						V				445.01					
						V							446		
446						V	(447.14 - 447.22) Fault - clay zone @ 75°			447.14					
						/	fault.								
						V	(449.75 - 449.87) Broken core - Fault.								
448													449		
		m				V				450.19					.15
450						V									
						V							452		
452										453.24					
						V									
454						V	(455.20) 1.5 cm Quartz veinlet @ 32°								
							3 mm pyrite band.								
						/	83-pyult.								
456						V									

HOLE NO.: EC-173 | PROJECT: EXPO | PAGE NO.: 39 OF 39

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: -90° | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: Pyrophyllite	ALTERATION: Silica	ALTERATION: Sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
456		m		fg			z 93 vn. (356.12) 2 cm. qtz veinlet @ 20°			456.29				456.29	.15
458							E O H. 456.28 m								

Drill core data from hole EC-173

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
2.13	5	109501	22	55	55	0.5
5	8	109502	32	53	75	< 0.5
8	11	109503	30	51	70	0.5
11	14	109504	26	29	45	< 0.5
14	17	109505	34	83	50	< 0.5
17	20	109506	35	99	85	< 0.5
20	23	109507	48	131	70	< 0.5
23	26	109508	82	78	110	< 0.5
26	29	109509	57	87	95	< 0.5
29	32	109510	34	115	70	< 0.5
32	35	109511	37	55	90	< 0.5
35	38	109512	55	68	55	< 0.5
38	41	109513	40	64	60	< 0.5
41	44	109514	191	82	145	< 0.5
44	47	109515	51	77	75	< 0.5
47	50	109516	115	104	90	< 0.5
50	53	109517	91	98	140	< 0.5
53	56	109518	72	55	130	< 0.5
56	59	109519	73	75	85	< 0.5
59	62	109520	179	107	110	< 0.5
62	65	109521	511	86	140	< 0.5
65	68	109522	1150	190	200	< 0.5
68	71	109523	498	84	125	< 0.5
71	74	109524	80	85	70	< 0.5
74	77	109525	88	100	105	< 0.5
77	80	109526	43	101	110	< 0.5
80	83	109527	33	85	75	< 0.5
83	86	109528	406	84	75	< 0.5
86	89	109529	36	45	30	0.5
89	92	109530	31	76	50	0.5
92	95	109531	31	164	80	0.5
95	98	109532	18	61	30	0.5
98	101	109533	48	71	110	0.5
101	104	109534	893	30	295	1
104	107	109535	255	22	200	0.5
107	110	109536	2490	58	400	2
110	113	109537	718	53	595	0.5
113	116	109538	913	52	800	1
116	119	109539	588	56	500	< 0.5
119	122	109540	409	56	315	< 0.5
122	125	109541	913	59	630	< 0.5
125	128	109542	411	60	310	< 0.5
128	131	109543	495	57	215	< 0.5
131	134	109544	396	49	390	< 0.5
134	137	109545	500	72	235	< 0.5
137	140	109546	308	59	105	< 0.5
140	143	109547	138	45	75	< 0.5
143	146	109548	414	25	70	< 0.5
146	149	109549	600	73	75	< 0.5
149	152	109550	268	58	65	< 0.5
152	155	109551	495	64	75	< 0.5
155	158	109552	131	75	60	< 0.5
158	161	109553	138	77	65	< 0.5
161	164	109554	299	60	90	< 0.5
164	167	109555	216	99	90	< 0.5

Drill core data from hole EC-173

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
167	170	109556	1050	117	120	< 0.5
170	173	109557	579	117	80	< 0.5
173	176	109558	108	88	65	< 0.5
176	179	109559	152	82	65	< 0.5
179	182	109560	36	69	55	< 0.5
182	185	109561	47	78	45	< 0.5
185	188	109562	204	160	140	< 0.5
188	194	109563	380	278	75	< 0.5
194	197	109564	1530	216	180	< 0.5
197	200	109565	74	118	30	< 0.5
200	203	109566	75	201	45	< 0.5
203	206	109567	64	176	65	< 0.5
206	209	109568	448	57	60	< 0.5
209	212	109569	395	88	115	< 0.5
212	215	109570	131	66	75	< 0.5
215	218	109571	141	69	105	< 0.5
218	221	109572	98	132	155	< 0.5
221	224	109573	63	105	105	< 0.5
224	227	109574	486	166	240	1
227	230	109575	272	213	205	< 0.5
230	233	109576	5080	93	400	0.5
233	236	109577	90	64	55	< 0.5
236	239	109578	100	11	25	< 0.5
239	242	109579	30	22	30	< 0.5
242	245	109580	31	93	40	< 0.5
245	248	109581	33	154	45	< 0.5
248	251	109582	575	144	50	< 0.5
251	254	109583	139	360	65	< 0.5
254	257	109584	131	260	80	< 0.5
257	260	109585	52	370	90	< 0.5
260	263	109586	100	473	90	< 0.5
263	266	109587	51	242	65	< 0.5
266	269	109588	164	146	85	< 0.5
269	272	109589	80	250	145	< 0.5
272	275	109590	515	167	110	< 0.5
275	278	109591	51	71	40	< 0.5
278	281	109592	72	157	65	< 0.5
281	284	109593	395	177	150	< 0.5
284	287	109594	1255	77	125	< 0.5
287	290	109595	58	219	60	< 0.5
290	293	109596	110	265	105	< 0.5
293	296	109597	110	375	60	< 0.5
296	299	109598	382	356	120	< 0.5
299	302	109599	535	79	180	< 0.5
302	305	109600	190	215	150	< 0.5
305	308	109601	187	160	200	< 0.5
308	311	109602	154	108	135	< 0.5
311	314	109603	615	121	120	< 0.5
314	317	109604	293	26	130	< 0.5
317	320	109605	189	199	205	< 0.5
320	323	109606	118	132	210	< 0.5
323	326	109607	549	367	130	< 0.5
326	329	109608	3810	130	265	< 0.5
329	332	109609	10000	46	620	2
332	335	109610	5000	166	480	< 0.5

Drill core data from hole EC-173

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
335	338	109611	1355	105	235	< 0.5
338	341	109612	381	51	125	
341	344	109613	903	71	140	
344	347	109614	403	70	175	
347	350	109615	218	119	165	
350	353	109616	593	201	205	
353	356	109617	264	146	135	
356	359	109618	443	146	175	
359	362	109619	336	159	145	
362	365	109620	371	291	285	
365	368	109621	1585	130	365	
368	371	109622	6320	65	265	
371	374	109623	277	77	225	
374	377	109624	1425	93	445	
377	380	109625	3080	131	615	
380	383	109626	2120	167	510	
383	386	109627	1245	135	245	
386	389	109628	222	247	140	
389	392	109629	2110	216	225	
392	395	109630	2480	101	410	
395	398	109631	3510	48	575	
398	401	109632	2830	47	490	
401	404	109633	2470	40	410	
404	407	109634	3090	58	610	
407	410	109635	1710	99	110	
410	413	109636	2860	78	255	
413	416	109637	3280	37	370	
416	419	109638	2170	56	200	
419	422	109639	3740	206	305	
422	425	109640	2420	88	200	
425	428	109641	3250	144	315	
428	431	109642	2160	95	145	
431	434	109643	1735	54	165	
434	437	109644	1655	133	80	
437	440	109645	1935	80	255	
440	443	109646	2960	216	190	
443	446	109647	3110	387	295	
446	449	109648	2240	238	335	
449	452	109649	1440	76	105	
452	456.28	109650	1545	77	125	

HOLE NO.: EC-174 | PROJECT: EXPO | PAGE NO.: 1 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: MAY 18, 1990 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: MAY 19, 1990 | SCALE: 1" = 2 m

INCLINATION: -90° | BEARING: — | TOTAL DEPTH: 90.53 m | LOGGED BY: D. J. PAWLIUK

COMMENTS: Hole lost at 90.53 m depth when rods stuck in soft, broken, clay-rich rock. Relatively good core recovery considering material cored.

AVE CORE REC'Y / HOLE:

SECTION	ALTERATION: propylitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
18								18.29			18.29		
		M		W	PY				73				<.1
20								20.11					
											21.00		
22								21.33					
								22.86		NQ			<.1
24											24.00		
								24.68	66				
26								25.29					<.1
											27.00		
28								27.73					
				W				29.26	88				
30													

0.00 - 18.29 CASING

18.29 - 46.50 FELDSPAR PORPHYRY. Pale brownish cream to greyish brown with local orange to yellow-brown limonitic sections. Fine grained; blocky to subround feldspar phenocrysts av. 1-3 mm across within aphanitic greyish brown matrix. Phenocrysts somewhat to intensely altered to clay minerals. Vugs up to few mm across present throughout form about 0.5% rock volume. Traces to locally 0.5% pinkish zeolite (?) spots to 2 mm above 29.80 m depth. Rock matrix relatively hard, generally weakly to moderately silicified throughout most of rock unit. Rock locally appears similar to andesite tuff.

(18.29 - 31.09) Moderately to locally finely broken core.

(18.29 - 20.11) Ground core; 73% recovery.

(18.98 - 19.43) Moderately silicified; cream coloured feldspar as irregular masses and veinlets.

(19.43 - 19.81) Possible fault; finely broken, clay-rich section coloured yellow-brown by limonite.

(20.72 - 20.84) Orange limonite-rich interval. 2 mm mud on fracture subparallel c.a.

HOLE NO.: E -174 | PROJECT: | PAGE NO.: 2 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
30				W			(23.65) Probable fault; 3 mm mud and finely broken core on fracture at 20° to c.a.		<1	30.94					
							(23.90) Probable fault; 15 mm finely broken core								
							(24.68-25.29) Ground core; 66% recovery.								
							(25.90) Probable fault. 4 cm finely broken core.								
32							(26.59-26.91) Limonite stains fractures at about 20° to c.a.								
							(29.26-30.94) Ground core; 88% recovery.			32.61					
							(30.94-32.88) Rock stained pale orange-brown by limonite.						33.00		
							(31.10) Brown limonite on fracture at 10° to c.a.						27310		
							(31.34) White feldspar vlt 0.5 mm wide at 25°								
34							(32.55) Brown limonite on fracture subparallel c.a.								
							(33.33) Brown limonite vlt 6 mm wide at 12°; likely where py has weathered out of rock.		<1						<.1
							(34.20) As above 1 mm wide at 20°			35.66					
							(34.41) As above 1 mm wide at 14°						36.00		
36					I		(35.38-35.88) Fault. Mud and finely broken core between fractures at 40° to c.a. Abundant orange-brown limonite from 35.38-35.70.								
					I		(36.53-40.50) Light greyish brown, soft intensely fractured interval with 3 to 5% py, mainly diss and also as vlts. Less ruggy and less off-white clay mineral alteration than in overlying and in underlying rock. Still feldspar porphyry (?). Fractures mainly at 40° to 60°.		3-5	37.18			27311		<.1
38					I	py									
					I					38.70			39.00		
					I										
40					M		(38.60) Probable fault; smear of pale grey mud on fracture at 34°		<1				27312		2.1
			W		M										
					M					41.76			42.00		
42			W		M		(39.87-40.58) Orange-brown limonite stain.								

HOLE NO.: E -174 | PROJECT: | PAGE NO.: 3 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
42							(40.33-40.50) Fault. Mud and finely broken core.	<1						
							(40.50-42.05) Moderately to intensely brecciated, contains sections up to 15 cm long where grey quartz forms 25-50% rock volume. Locally to 1% discontinuous, wispy, off white feldspar vlts.		43.58					
44							(40.97) Watery grey crosscutting quartz vlts to 2 mm wide at 35 to 50° to c.a.		44.65			44.50		
	W		W	M			(41.32) Fault. Smear of pale orange limonitic mud on fracture at 48°.	3				27313		
			W	M			(41.32-41.69) Healed fault. Angular feldspar porphyry and grey quartz clasts in v. fine grained pale brown matrix well cemented with silica.							
46			W	I	M		(41.80) Limonite vlt 2 mm wide at 49°.							2.1
	W	W		M			(43.31) Dark watery grey quartz vlt 9 mm wide at 30°	<1						
							(43.89) Healed fault 4 cm wide at 27° with pale brown well cemented matrix.							
48							(44.65-46.50) Moderately to intensely fractured with 2% short, wispy off-white sericite ± clay? vlts throughout. 3% diss py		47.70			47.50		
							(45.15) Watery grey quartz vlt 4 mm wide at about 25° offset 3 cm along fracture at 40°.							
				W			(45.82-46.09) Breccia band at about 50°							
50							(46.50) Irregular, fairly sharp contact with underlying unit at about 50°.							
							46.50-73.13 BRECCIA. Abundant clay (30-40% overall), silica (25%), pyrophyllite to 10%; zeolite and sericite present in lower half. Rock usually has pale limonite stain. Protolith fine grained difficult to determine in most of interval. Moderately to finely broken core.		50.90					
52									52.42					
							(48.18) Banded watery grey quartz vein 13 mm wide at 45°							
							(48.77) Watery grey quartz vlts to 3 mm at about 40°.							
54							(49.03) Banding at 65°							

HOLE NO.: E 174 | PROJECT: | PAGE NO.: 4 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
54							(52.22-52.37) Mud and finely broken core; probable fault.								
							(52.39) Watery grey quartz vlt 10 mm wide at 47°.								
							(52.67-53.32) Generally finely broken core and mud; probable fault.								
							(53.55-53.67) Probable fault; mud and finely broken core along fracture at about 63°								
										55.47					
56							(55.32-55.47) As above at about 55°								
							(55.47-56.07) Late siliceous breccia; subangular grey quartz clasts av. 4 mm across in light greyish brown matrix; limonitic fracture subparallel c.a.		<1						
							(58.06-58.26) Siliceous breccia; about 85% quartz, 10% clays, 5% limonite.			58.06					
58							(58.06-59.13) Ground core; 79% recovery.				79				
							(59.22-70.74) About 7% vugs average abot 8-10 mm across, usually lined with clays.			59.13					
							(59.90-61.02) Stockwork with watery grey quartz vlts av. 1-2 mm wide forming 10 to 25% rock volume.								
60					Int		(65.25-65.90) Light brown, moderately pyrophyllitized andesite tuff? ↑ fine grained,			61.26					
62															
										63.09					
64															
										64.61					
66	M			W											

HOLE NO.: E -174 | PROJECT: | PAGE NO.: 5 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER: 25 30

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
66							(68.88 - 69.18) Ground core; 83% recovery			66.14					
							(71.17 - 73.13) Late siliceous breccia with clay matrix; 3 to 5 % small, angular grey quartz clasts								
							(72.90 - 73.13) Fault. Mud and finely broken core on fracture at about 70° to c.a.		<1						
68							73.13 - 90.53 ANDESITIC TUFF (?) or GREYWACKE. Pale grey to grey, often stained orange-brown by limonite. Fine to very fine grained. Generally moderately altered with silica, pyrophyllite, sericite, zeolite, chlorite. 3% py diss and as irregular vlts below 85.18. Leached and bleached in appearance above 85.44.			68.58					
		W								68.88	83				
		M								69.18					
70															
						X	(75.19) Vugs to 20 mm across.								
72							(75.29) Faint watery grey quartz vlts to 3 mm wide at about 30°.								
										72.24					
							(75.47 - 75.72) 3% diss py; identical to unit below 85.44.								
							(76.73) Fault. 2 mm pale orange mud on fracture at 29°.			73.30					
74				W			(76.83) Off-white feldspar vlt 2 mm wide at 65°.								
							(77.89 - 77.96) Moderately brecciated.								
		M	M				(78.34) Probable fault; 3 cm pale yellow brown mud.								
						M				75.29					
76									3						
									<1						
78															

HOLE NO.: EC-174 | PROJECT: | PAGE NO.: 6 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: gypsum/lime	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
78							(78.57) Dark brown limonite on fracture at 40°			78.33					
		M					(81.20 - 81.80) Limonitic fractures subparallel to 40° to c.a.			79.09					
	W														
80										81.38					
				M	limit		(83.52 - 85.13) 10% vugs up to 25 mm across.		<1						
82															
							(86.48) Pale brown grey, faintly banded, very fine grained greywacke band 5 cm wide at about 61° to c.a.			83.52					
84							(86.68) As above; 1 cm wide at about 80°; crudely graded bedding indicates sequence probably right-side up, with tops towards top of hole.						84.0		
							(87.32 - 87.53) Conglomeratic bed with angular to round clasts up to 4 cm across, av. less than 1 cm; 7 mm band of very fine grained pale brown greywacke at 87.37 topped by 1 mm band of py. Crude graded bedding here also indicates tops towards top of hole.		3					#27314	<.1
86					py					86.56					
88							(87.59 - 88.04) Moderate clay-sericite alteration as subround patches to 4 cm across.			87.48			88.0		
					py		(88.41) off-white to pale grey greywacke bed 2 cm wide at 60°							#27315	<.1
90															

HOLE NO.: KC-174 | PROJECT: | PAGE NO.: 7 OF 7

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
90					(89.03) As above; 1.5 cm wide at about 55° to c.a. (89.38 - 89.45) Conglomerate band with angular clasts av. 3-4 mm across, up to 17 mm. Topped by 6 mm wide pale grey greywacke bed at 56°. (89.97) Pale grey greywacke bed 6 mm thick at 29°. 90.53 END OF HOLE.		3	90.53		NQ	90.53		<.1

Drill Core Data For Hole EC-174

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
18.29	21	27307	48	204	135	< 0.5
21	24	27308	10	11	65	< 0.5
24	27	27309	6	41	120	< 0.5
33	36	27310	29	109	120	< 0.5
36	39	27311	496	86	125	< 0.5
39	42	27312	441	55	365	< 0.5
42	44.5	27316	42	24	130	< 0.5
44.5	47.5	27313	107	29	165	< 0.5
84.5	87.5	27314	433	91	105	< 0.5
87.5	90.53	27315	564	67	100	< 0.5

HOLE NO.: EC-175 | PROJECT: Expo | PAGE NO.: 1 OF 26

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: May, 1990 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: May, 1990 | SCALE: 1" = 2 metres

INCLINATION: -70° | BEARING: az. 270° | TOTAL DEPTH: | LOGGED BY: D. J. PAWLIUK

COMMENTS: Drilled to test area south of EC-154 after hole EC-174 lost.

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: propylitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
27					py	py qtz	0.00 - 27.43 (?) CASING. NO STICKUP							
			W			set.	27.43 - 36.00 FELDSPAR PORPHYRY, MINOR QFP		27.43			27.43		
	W						Light grey to greenish grey to creamy brown, fine grained with quartz eyes to few mm across.							
			W			py	Soft; feldspars altered to clay and sericite.	2-3				#27317		<.1
29	W		M				2-3% diss py throughout; local hairline vlts.		29.26			30.00		
			W			py	Py greenish below 32.00m. Brownish orange limonite on patchy, pervasive stain							
		M					and also lining fractures below 34.71.							
			W				(27.68) Quartz (60%) - py (40%) vlt 8 mm wide at 25°							
31							(27.94) Sericite lines hairline fracture at 38°.		31.55			#27318		<.1
			W				(30.26 - 30.61) Fault. Pale grey mud and soft, locally finely broken core.				NQ			
	W		W				(31.20 - 31.48) As above.							
33	MW					qtz	(32.08 - 32.24) As above, at about 65°					33.00		
	M		M		py	lmnt	(33.47 - 36.00) 2 to locally 5% pale pink-brown zeolite.	3						
	W													
			W											
35			M				36.00 - 36.59 BRECCIA. 2% light grey angular quartz clasts, remainder mainly feldspar porphyry. Matrix similar		34.69			36.00		<.1
						lmnt	in colour + composition to that of feldspar porphyry.	1						
							36.59 - 41.08 FELDSPAR PORPHYRY. Brownish grey, finer grained	2						
37						fld	and fewer quartz eyes than topmost unit. More							
							off-white clay mineral alteration and py as							
					py		irregular, wispy masses as well as diss		37.64					
						lmnt	(36.62) Orange lmnt on fracture at 51°.	4						
39							(37.16) Irregular off-white feldspar vlt 2 mm wide at 42°.					39.00		

HOLE NO.: E 175 | PROJECT: Expo | PAGE NO.: 2 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
39							(37.89 – 38.97) Occ. lmnt fractures at ± about 50°		4				3900		
	W	W	W	W	py		41.08 – 42.82 SILICEOUS BRECCIA. Medium grey with abundant orange to cream coloured patches where limonite and/or clay minerals present. Hard. Moderate to intense, patchy clay mineral alteration below 41.97.								< .1
41		I		M		lmnt vlts	(41.24) Pink zeolite vlt 5 mm wide at 35°.		2	40.82					
		I		M			(41.27) Orange lmnt vlt 20 mm wide at about 20°.						4200		
		I		M		clay vlt									
43		I		M	py		42.82 – 45.47 FELDSPAR PORPHRY. Light grey to orange to cream coloured. Moderate to locally intense clay mineral alteration of feldspars. Pink zeolite within larger clay patches.								
		W		M		clay lmnt				43.89					
		M	W	M			(42.97) Hairline clay vlts at 40°.		0.5						
		M	W	M			(43.60) " Dk. brown lmnt on fractures @ 30 to 58°								
45		M	W	M		lmnt	(44.08) Quartz vlt 24 mm wide @ 40°.								
		W		M		lmnt	(44.50) Red-brown lmnt on fractures from 55° to subparallel c.a.						4500		
		I		I		lmnt	45.47 – 46.47 SILIECEOUS BRECCIA. As for 41.08 – 42.82 except here more limonite and much less clay minerals.		< .5						
		I		M		lmnt	Contact with overlying unit at 27°. These siliceous breccias may be intensely silicified feldspar porphyry.			46.94					
47				W		lmnt	(45.69) Lmnt on fracture at 60° – 70°.								
		W		M		lmnt	46.47 – 48.50 FELDSPAR PORPHYRY. As for 42.82 – 45.47 except intense to moderate lmnt staining below 47.33.						4800		
				M		lmnt	(47.70) Red-brown lmnt fracturing at 15° within and parallel breccia vlt 4 cm wide.								
49				M		lmnt	(48.23) Limonitic breccia band 5 cm wide at about 35°								
		M					48.50 – 49.54 BRECCIA. Brownish orange to light grey, fine grained with longest quartz clasts up to 13 mm across. Matrix fine grained feldspar porphyry in composition.		3	50.14					
51													5100		

HOLE NO.: E 175 | PROJECT: | PAGE NO.: 3 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
51			W				Pervasive brownish orange limonite staining. Contact with overlying unit at 20°, with underlying unit at 32°. No sulphides seen.	3				5100		
	W	W		M	py bn cp	bn	(48.91) DK brown lmnt on fracture at 24°.							
53	W				bn py		49.54 – 51.59 FELDSPAR PORPHYRY. Light grey to pinkish white, fine grained with occ. blocky feldspar phenos to few mm long. Weak to locally moderate clay mineral and zeolite alteration as subround spots and irregular masses, av. 3-6 mm across, often with faint boundaries. As for 36.59 – 41.08 but less py here.		5334			5400		0.2
	W				py		(49.54 – 49.88) 2% vugs to few mm lined by dk orange lmnt.							
55	W	W			bn		51.59 – 56.20 BRECCIA. Light brownish grey. Angular to subround feldspar porphyry, quartz and feldspar clasts in matrix varying between andesite tuff and very fine gr. feldspar porphyry. Coarser clasts form about 10% rock volume; up to 4 cm across. Upper contact at 43°.	3						0.1
	W				py			0.5	5639					
	W		M	W				5				5700		
57		M			bn		(51.70 – 55.26) Traces to 0.5% bn as diss specks (70%) along hairline fractures (30%) to 2 cm long at about 10° to c.a. Couple cp specks at 51.75.	2						
	W		M		py bn	py	~~152.00~~							
				W	lmnt		(53.56) 0.5 mm wide bn vlt at 49°. (53.97) Watery grey, crosscutting quartz vlts 1 and 2 mm wide at 55° and 30° to c.a.	0.5	5944					<.1
59							(55.57 – 56.20) Bleached; moderate clay and sericite alteration. (55.88 – 56.39) Moderately broken core; possible fault at 15°.	1				6000		
	W				bn	qtz	56.20 – 59.16 FELDSPAR PORPHYRY. As for 49.54 – 51.59 but more clay.							
	W	W		W	py		(56.73) 1% bn specks over 4 cm.							
61	W				bn? py		(57.82 – 58.04) Traces bn specks. (58.47 – 58.87) Moderately broken core; probable fault at 30°.							<.1
							59.16 – 59.57 SILICEOUS BX with pale brown clay matrix.							
63				M	py		59.57 – 64.83 FELDSPAR PORPHYRY. Light grey-brown, fine grained, feldspars av. about 1.5 mm long. 2% watery grey, crosscutting quartz vlts throughout at 20° to 65°.		6248			6300		

HOLE NO.: 1 | PROJECT: | PAGE NO.: 4 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

py; others qtz

SECTION	ALTERATION: pyrophyllitic	ALTERATION: silica	ALTERATION: sericitic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
63				M	py		(61.77–62.01) Intensely brecciated; lmnt on fracture at 15°.	3				6300		
							(62.78) Late bx band 4 cm wide at 31° with grey clay and py matrix.							
				W			lmnt (63.20) 10% grey qtz vlts at 20°.							
	W	M					(64.00–64.31) Moderately broken core with dk brown lmnt on fracs at 50°; possible fault.							
65					py		64.83–65.90 SILICEOUS BRECCIA. Pale grey clay to sand-sized matrix. Bleached; some sericite along fractures. Lower contact discrete at 56°.	<.5	6553			6600		
	M		W											
	W	W					65.90–67.80 ANDESITE TUFF Light greyish brown, moderately pyrophyllitized, weakly to locally moderately brecciated.	3						
67	M				py		qtz							
	W		W	W			Contact with underlying unit discrete at 35°.							
							(66.96–67.20) Pale grey fine grained greywacke bed; graded bedding indicates tops towards top of hole. Upper contact at about 85°.							
							feldspar	2	6858			6900		
							67.80–68.58 FELDSPAR PORPHYRY. Light grey, fine grained, weak white clay-sericite alteration throughout.							
69							lmnt (68.29) off-white feldspar vlt 4 mm wide at 40°	1						
							68.58–71.81 BRECCIA. Light grey brown to light green-brown, fine grained with clasts av. about 4 mm across. Few broken, watery grey quartz vlts. Matrix approx. composition of andesitic tuff. Rock increasing clay content, alteration softer rock with depth. Gradational contact with underlying unit across about 0.5m							
					py									
71									7163			7200		
			M	I			(69.56) DK brown lmnt on fracture at 32°.							
				I			(70.00–70.87) DK. brown lmnt on fracture subparallel c.a.							
				I			(71.06–71.70) 30% pervasively stained with orange limonite.							
73			W	I			71.81–77.58 ANDESITE TUFF Light grey with local pale creamy brown to off-white sections. Fine grained. Intensely fractured with about 8% watery grey quartz vlts up to 4 mm wide, crosscutting, randomly oriented fine stockwork. Weak to locally intense clay mineral alteration.	5						
	W			I	py		qtz 80% py 20% vlts							
				I										
75	W	W	W	II					7468			7500		

HOLE NO.: EC-175 | PROJECT: | PAGE NO.: 5 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
2				7500		
<.5	77.72			7800		
	80.77			8100		
	83.67			8400		
		63				
	86.56			8700		

75 — (71.90 – 72.77) Intense to moderate clay mineral alteration. Faults with vHs 80% qtz 20% Py mud and finely broken core on fractures at 48° @ 72.18, 52° @ 72.39, 25° @ 72.77m.

(73.02) Py vHt 1 mm wide at 20° to c.a.

(73.71 – 73.80) As for 71.90 – 72.77 at 50° to c.a.

77 — (74.03) Py vHt 6 mm wide at about 35°.

(74.47) Fault at 80°

(75.47) lmnt Fault at ~~about~~ 70°.

(77.23 – 77.48) lmnt Fault. Intense clay alteration; mud and finely broken core. Cannot measure orientation.

79 — 77.58 – 82.14 SILICEOUS BRECCIA Pale grey, intensely silicified rock with lmnt along abundant hairline fractures throughout. Rare trace py. 2% vugs to 1 mm across below 79.67.

(78.88) Red-brown lmnt on fracture at 17°

(81.23 – 81.82) Late bx; moderate clay mineral alteration.

81 — 82.14 – 97.86 PYROPHYLLITE TUFF. Pale brown to pale grey to pale green, fine grained, likely moderately altered lmnt qtz andesite tuff. Gradational contact with underlying lmnt andesite tuff over about 3.5 m. Weak to locally intense clay mineral alteration.

83 — (82.14 – 86.22) Pervasive light yellow-brown lmnt stain

(82.14 – 87.88) Moderately brecciated, moderate to intense clay mineral alteration.

(82.43) Dk. brown lmnt on fracture at 23°

(82.79) As above at 17°

(82.30) Fault. 1 cm mud and finely broken core on fracture at about 33°.

85 — (83.65) Probable fault; 2 cm finely broken core.

(84.10 – 87.88) Fault zone. Soft and finely broken core, and mud.

lmnt Fractures at 60° at 84.10, 40° at 85.97, 70° at 86.34.

(83.67 – 86.56) Ground core; 63% recovery.

87 — (86.56 – 88.09) " " 59 " .

HOLE NO.: E 175 | PROJECT: | PAGE NO.: 6 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: | AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
87							(88.09–90.22) Ground core; 94% recovery.	<.5		59		87		
					py	py	(87.76–95.48) 2% py mainly diss with few irregular, discontinuous vlts.	2	88.09					
	M						(88.20) Py vlt 1 mm wide at 75°.							
89	M			M			(88.63) Fault. 14 mm mud on fracture at 26°.			94				
	M		W	W			(88.90) Fault. 30 mm finely broken core and slickenside and mud on frac. @ about 60°.							
		W					(89.87) Py vlt 2 mm wide at 40°.		90.22			90		
						ser.	(90.91) Fault. 8 mm mud and finely broken core on frac. @ 35°.							
91	W						(90.91–93.57) Fault zone. Generally soft, intensely fractured (sericite coats some fracs.) core; remainder (40%) mud and finely broken core. Fractures at about 55° @ 91.27, 51° at 91.84, 80° at 92.38, 75° at 92.93, 75° at 93.50, 40° at 93.57.							
	W				py									
	M			I		G.C.	(93.80) Irregular py vlts to 1.5 mm @ about 35°.		92.66					
	W			I			(94.99) Fault. mm mud on frac. @ 55° within bleached section 40 cm wide with moderate clay mineral and weak sericite alteration; soft core.					93		
93	M			I										
	M	W	W			py	(95.90) Py-sericite vlt 1 mm wide subparallel c.a. offsets 0.5 mm py vlts at 25° by 8 mm.			91				
	W			M		ser.	(95.77–97.76) Gradual increase in chlorite content gives rock green colour.		94.49					
95	M						(96.14) Py-rich band 40 mm wide at 50°.	3	95.71			96		
	M			W		py	97.76–107.54 ANDESITE TUFF. Green to grey-green, fine grained, locally faintly banded. Generally moderate chlorite alteration of mafics. Patchy, very weak clay mineral and pyrophyllite alteration. Local blotchy, spotted to few mm across.							
97	W			W	py	qtz			97.23					
	W					py	(98.81) Py vlts 0.5 mm wide at 25°.							
						py	(98.25) Fault. Red hematite on frac. @ N10°.	1				99		

(92.66–94.49) G.C.; 91% recovery.
(94.49–95.71) G.C.; 84% recovery.

2 mm grey mud and traces of ?

HOLE NO.: [illegible] -175 | PROJECT: | PAGE NO.: 7 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
99							(100.44-100.70) Fault zone. Moderately broken core. Mud on fractures at 35° 40° and about 60°.	1	99.36			99		
							(100.82-101.86) Black spots av. 4-10 mm spots py, black mineral, and occasional magnetite traces.							
101					py mag		(103.20) Py vlts 1 mm wide at 36° and 60°.							
							(103.08) Quartz (75%) - py (25%) vlt 5 mm wide at 55° rimmed by 5 mm bright green chlorite along both margins.		102.41			102		
103	W			W M I I I I I I I I		qtz-py-chl. py	(104.25-107.54) Fault zone. Intensely fractured, moderately brecciated, moderate clay mineral alteration. Mud and finely broken core on fractures at 32° at 104.30, 37° at 104.86, 43° at 105.00, 67° at 107.04.							
	W		M				107.54-108.07 FELDSPAR PORPHYRY DYKE. Greyish brown, fine grained, moderately pyrophyllitized. Upper contact at 45°; lower at 55°.							
105	V											105		
	W	M	M		py		108.07-133.04 ANDESITE TUFF As for 97.76-107.54		105.46					
	W		M				(108.07-108.47) Fault zone. Moderately to finely broken core and mud on fractures at 55° at 108.07 and at 30° at 108.47.							
107		W				ser.								
	W		M				(110.0) Fault. 1 mm grey mud on fracture at 20°.							
	M		W				(110.59) Py vlt 0.5 mm wide at 56°.	0.5				108		
				W				0.5	108.51					
109					py			2						
	W					py			110.03					
						py						111		

HOLE NO.: '75 | PROJECT: | PAGE NO.: 8 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silicification	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
111					py		(112.46–117.99) General pervasive orange-brown limt as stain and also along fractures.	2	111.52			111		
							(112.88) Dk. brown limt on fracture at 25°.							
							(113.40) " " " " " subparallel c.a.							
113							(113.10) Fault. Mud and finely broken core 5 cm thick on fracture at 22°.	<.5						
	W	M		W	mod	limt	(113.60) Orange limt on fractures at 50°.							
							(113.74–117.99) Moderate to intense clay mineral alteration. Fault zone.		114.60			114		
							(113.77) Fault. 15 mm mud on frac. @ 69°.							
							(114.60–117.65) G.C.; 43% recovery							
115							(116.50) Fault. 5 cm mud and finely broken core at about 37°.							
										43				
							(117.00–117.65) Fault. Pale brown mud.							
							(117.65–117.99) Moderate white clay and sericite alteration.					117		
117					mod		(117.65–120.70) G.C.; 48% recovery		117.65					
			M	M			py, ser. (119.67–119.94) Fault. Mud and finely broken core at about 40°.							
	M	W		M			(120.09–120.19) As above at about 70°.	1		48				
119				M			(120.44–125.95) Pervasive, intense, brownish orange limt stain throughout. Red-brown limt lining vugs up to 7 x 1 cm where py? has been weathered out. Generally moderately broken core.	<.5				120		
				I										
		M		I	py	qtz, minor ser.	(120.44–129.28) Fault. Moderately to finely broken core and mud.	1	120.70					
121						qtz	(121.60) Watery grey qtz vlt 5 mm wide at 17°.	<.5		84				
					limt		(120.70–123.75) G.C.; 84% recovery							
							(123.30) Watery grey qtz vlt 2 mm wide at 50°.							
123												123		

HOLE NO.: 5 | PROJECT: | PAGE NO.: 9 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
123							lmnt					123		
				M			(123.75 – 126.34) G.C.; 54% recovery							
							(123.75 – 124.00) Probable fault; moderately to finely broken core.		12375					
							(125.49 – 125.69) As above.	<.5				27349		
				I			(126.04 – 127.37) Moderately broken core.			54				
125				M			(126.17 – 127.27) Faultzone. 25% mud and finely broken core. Fracture at about 80° at 126.41, 40° at 126.71, 52° at 127.00, at 78° at 127.24.							
							qtz							
			M	I								126		
							(128.27 – 129.23) weak to moderate clay mineral alteration.		12634					
127	W			M			py	2 to 3	12679					
		M	W		py		(128.50 – 129.20) Moderately broken core. Probable fault at 128.67; orientation ?					27350		0.1
	W			M	bn		(128.10 – 129.81) Traces bn mainly as specks and occ. short, hairline vlts; rare specks cp.							
	W													
129	W				py		(129.63) Speck moly.		12893			129		
					bn mo		ser. (129.80) About 0.5% v. fine diss cp over 3 cm.							
					py		qtz (129.58 – 131.72) 80% maroon coloured hematite-rich tuff with local traces magnetite.							
		W			mo		py (130.44) Pale grey qtz vlts to 3 mm wide at 30°.					109651		0.3
131	W	M			mag		(130.50) Few mo, cp specks							
							(130.70) As above to 2 mm at 23°.							
	W	M					(130.65) Numerous moly specks & 1% moly, traces cp over 8 cm		13106					
							(131.42 – 131.72) Few moly specks, couple cp, rare bn.					132		
	W	M					(131.76) Red hematite on hairline fractures at 15° and 77°.							
133	M		W	M			ser. (132.10 – 132.47) Maroon and py hematite-rich section with traces mag, numerous moly specks, few cp specks.		13289			109652		0.1
	M			M			(132.80 – 133.04) As above.							
				M			133.04 – 168.70 PYROPHYLLITE TUFF Creamy brown. As for 8[illegible] – 97.76 Except here rock harder, often weakly silicified and slightly less clay mineral alteration. Gradational contact with overlying andesite tuff over few m.	6				135		

HOLE NO.: / PROJECT: PAGE NO.: 10 OF

COLLAR ELEV.: GROUND ELEV.: DATE STARTED: REF. TO CLAIM CORNER:

COORDINATES: N. E. DATE FINISHED: SCALE:

INCLINATION: BEARING: TOTAL DEPTH: LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
135	M				py		(133.12 – 162.83) Traces to 0.5% bn throughout as diss specks and short (to 3 cm) hairline vlts along fracture sfcs.	6				135		
	M		W	W	bn	qtz	(133.39 – 134.52) Moderate clay mineral alteration.		135.74					
	M	W	W		py	qtz	(133.60) Qtz vn 2.3cm wide at 25°; mod. fractured.	2						<.1
139	M						(134.01) " " 1.3 " " " 25°; " " .							
	M						(133.75) Fault. 6 mm mud at 57°.							
							(134.35) " 10 mm finely broken core at 75°.							
	I						(134.82 – 136.17) 6% py as wispy, interconnected masses to few mm across.					138		
139							(136.85) Few grey qtz vlts to 10 mm wide at 20°.		138.99					
					bn	bn	(137.40) Py (95%) – bn (5%) vlt. 2.5mm wide at 20°							
	M				py		(138.97 – 139.11) 65% late bx vlts at 22°, up to 2 cm wide.							.2
						py	(139.20) 1% bn specks over 2 cm							
	I						(139.57) 2% " " " 1 cm							
141							(140.92) Late bx vlt 3 mm wide at 15°.							
	M				bn	bn	(141.20) 1% bn over 6 cm.					141		
							(141.57) 1% bn over 4 cm.							
	I	W					(141.68) Hairline, bn vlts at about 35°.		142.04					
				M		qtz	(142.09) Hairline py, bn vlt at 16°							
143						qtz	(143.92) 2% bn over 1 cm, diss specks. (mainly)							.2
							(142.26 – 142.95) Moderately brecciated with late siliceous bx vlts; siliceous clasts to 18 mm across.							
							(142.86) 1% bn specks across 1 cm.					144		
			W	M		qtz	(143.00) Qtz vlt 12mm wide at 65°.							
145						qtz	(143.36) Fractured dk grey qtz, py vlt 12 mm wide at 27°.							
							(143.92 – 144.34) Fine grained, brownish grey grey wacke with discrete contacts with tuff; upper at 14°, lower at 12°.		145.08					-.1
							(145.28 – 145.65) 0.5% diss bn specks.							
149							(145.30) Watery grey qtz vlts 2 mm wide at 40°.					147		

COMMENTS:

AVE CORE REC'Y / HOLE

HOLE NO.: E 175 | PROJECT: | PAGE NO.: 11 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
147						py						147		
	M				py		(146.57) Light brown-grey qtz vlt 3 mm wide at 11°.	2						
	M	W	W	W	bn		(148.13 - 149.56) Weak to locally moderate clay mineral alteration.							
			W				(148.24) Probable fault; smear of off-white mud and sericite on fracture at 41°.		148.13					.1
149	M		W				(149.86 - 149.93) Fault. Moderately to finely broken core.							
			W		py		(150.52 - 151.47) Weak to locally moderate clay mineral and sericite alteration.							
	M				py							150		
							(150.74) Probable fault; soft, broken, clay-rich core.							
	W				bn		(150.89) Greywacke band 1.5 cm wide at 20°.							
151				W			(151.09) Greywacke band 2 cm wide at 42°.		150.57					
	M	W				py	(150.18) Py vlt 2 mm wide at 52° offset by later fracture.							.1
							(153.32 - 153.62) Probable fault. Moderately to finely broken core.	3						
	W						(153.65) Dark grey, fractured, discontinuous quartz vlts to 5 mm wide at 16°.							
153	M					qtz	(153.83) Py vlt 3 mm wide at 60° cuts across watery grey qtz vlt 6 mm wide at 20°.							
	W				py							153		
		W					(154.26) 0.5% bn over 10 cm.		153.77					
	M				bn		(155.01 - 155.42) Fault. Moderate clay mineral and sericite alteration. Finely broken core and mud 1 cm wide on fracture at about 23° at 155.38.							.2
155			M											
							(156.28) 1% bn over 3 cm diss.					156		
							(157.06 - 157.27) Fault. Moderate clay mineral and sericite alteration. Pale grey mud on fracture at 46°.	3						
157		W			py			3						
							(158.19 - 158.60) As above; on fracture at 40°, 30% orange-brown limonite stain.	2	156.97					.2
					bn		(158.67) 1% diss bn specks over 8 cm.							
159					py	X	(158.94) Quartz (70%) - py (20%) - bn (10%) vlts to 3 mm at 41°.					159		

HOLE NO.: 5 | PROJECT: | PAGE NO.: 12 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyroph/ltz	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
159	W		M	M			(159.23–160.57) Moderate clay mineral and sericite alterations; bleached.		Z				159		
	W		M	M	py		(159.35) Fault. 2 mm broken core at about 20°								
	W		M	M	bn		(159.41) As above at 40°.			160.17					.2
	W			M	py		(159.72) As above at 20°. orange-brown limnt stain.								
161		W		W			(160.46) Fault. 7 mm pale grey mud and finely broken core at 20°.		5						
	W				bn		(160.87) Py vlt 1.5 mm wide at 23°.		Z						
					py		(161.14) 2% diss bn specks over 2 cm.								
	W		M	M	py		(161.36) Slickensides on fracture at 25°. mostly stained orange by limnt,						162		
	W						(161.41–162.06) Weak to intense clay mineral and sericite alteration.			163.07					
163	M						Fault. Mud and finely broken core over 20 cm between								
	M		W	M	py		fractures at 53° at 161.96, 50° at 162.06. Note that								<.1
							below this fault no copper minerals seen.								
		W					(162.06–162.22) Brownish grey fine to med. gr. greywacke.								
165	M						Spotty, weak, orange clay mineral alteration below fault						165		
	W	W					and not above it within this hole.		Z						
	W	M					(163.31–164.38) Moderately to weakly brecciated; white vein			166.12					
	W	M					feldspar forms 60%, quartz 40%, breccia matrix.								
167	W	M					(163.69) White feldspar vlt 12 mm wide at 39°								<.1
		W					(164.80) DK grey qtz (85%) py (15%) vlt 2 mm wide at 80°.								
		W					(165.42) Py vlt 1 mm wide at 60°.						168		
		W					/								
169		M					168.70–169.72 SILICEOUS PYROPHYLLITE BRECCIA. Medium to coarse			169.16					<.1
		W					grained, light brownish grey. Grey quartz clasts in								
	M						grey wacke-tuff matrix. Clasts to 7 cm, av. say 8 to 12 mm and pyroph. tuff								
171							across. Fault contact at 31° with overlying tuff. Discrete contact						171		
							at 33° with underlying tuff								

HOLE NO.: 75 | PROJECT: | PAGE NO.: 13 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
171	M	W					169.72 – 182.62 PYROPHYLLITE TUFF. Light creamy brown to greyish green, fine grained, locally thinly banded and weakly brecciated. Gradational contact over about 10 m with underlying andesite tuff; pyrophyllite tuff likely an altered andesite tuff. Increasing chlorite content with depth.		2					171	
	M		W	W	py		(170.47) Probable fault at 30°.			17236					
173	M			M			(170.47 – 172.28) Somewhat bleached; weak clay mineral and sericite alteration.								
	M						(171.54) Py vlt 3 mm wide at 33°.						174		
	M			M			(173.08) Py (60%) – grey qtz (40%) wormy vlt 6 mm wide at 15°								
175	M	M		M			(176.03) Fault. 2 mm grey mud and finely broken core at 18°.			17526					
	W				py		(176.85) Py vlt 1 mm wide – subparallel c.a. offset at hairline py vlts at about 60°.								
	M						(177.43) Qtz (95%) – py (5%) vlt 10 mm wide at 26°.						177		
177	M						(177.49) As above at 48°; cuts across above vlt.								
							(178.13) Qtz (80%) – py (20%) vein 4 cm wide at 71°.								
	W						(178.97) Late siliceous bx band 9 cm wide at 65° with py matrix.								
							(179.01 – 179.62) Weakly silicified.								
							(181.14) Probable fault; slip at 63°.			17831					
179	M			W	py		py 182.62 – 273.89 ANDESITE TUFF. Greyish green to green, local light greyish brown sections. Spotted with green chlorite-rich clots. Fine grained. Interbeds of light brown pyrophyllite tuff. Mainly light greenish brown pyrophyllite tuff from 204.90 – 216.12. Moderately albitized from 223.46 to 230.38						180		
181	M	W							2	18136					
	M						Weakly to locally moderately albitized (?) from 230.38 to 273.89. Albite(?) and pyrophyllite content increasing towards bottom of unit. Gradational contact over about 15 mm with underlying tuff – green chlorite disappearing towards bottom								
183	W	W											183		

HOLE NO.: 1 | PROJECT: | PAGE NO.: 14 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
183													183		
	M	M	W		py		(183.69) Late siliceous bx vlt 20 mm wide at 14° with py matrix.		2						
							(184.54) As above; 5 cm wide at about 20°.								
							(184.89) Py vlt 2 mm wide at 30°.								
					py		(185.51) Fault. 4 mm pale grey mud at 60°.								<.1
185							(186.03) Vlt late siliceous bx with pyritic matrix 1.8cm wide at 36°.			184.56					
							(186.31) Qtz (75%) - py (25%) vlt 1/2 mm wide at 50°.								
	M			qtz-py			(189.20) Light grey qtz (95%) - py (5%) vlt 8 mm wide at 36°.						186		
							(190.40) Py vlts to 3 mm at 46°								
187							(190.57) Fault. Mud and finely broken core 6 mm thick on fracture at 15°.								<.1
				qtz			(193.38 - 194.88) Fault. Moderately broken core between slips at 30°.		1	187.60					
189	W	W	M	py			(193.40) Speck cp within vlt of late siliceous bx 3.3cm wide at 25°						189		
							(192.22) Speck moly, speck cp.								
							(192.63) Speck cp, couple specks cp, bn.								
							(191.34) Few specks bn								
191					bn					190.65					<.1
					py fmg		(195.48) Few specks black mineral (chalcocite?) to 2 mm across.		2				192		
				W	bn cp py		(195.73 - 196.48) Fault. Somewhat broken core. Slip at 10° to c.a. at 196.17.								.1
193	M	M		W	cp					193.70					
	M	W	W		py										
195													195		

HOLE NO.: 5 | PROJECT: | PAGE NO.: 15 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: N. E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS: | AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
195					ch?		chalcocite?					195		
					py	△	(197.88) Hairline bn vlts at about 70°.	2						
	W						(197.92) Molybdenite smear 3 mm across on slip sfc.							
	W						(198.78 – 199.23) 30% pale grey, wormy quartz (90%) – py (10%) vlts to 11 mm wide, randomly oriented.		19690					<.1
197														
		M			bn mo	bn	(200.33) Light grey qtz vlt 4 mm wide at 56°.					198		
							(200.71) Late bx vlt 8 mm wide at 28°.							
			W		py	qtz	(201.64) Few specks bn (?).							
199							(201.80) Qtz (90%) – py (10%) – bn (tr) vlt 3 mm wide at 28°.							<.1
		W					(202.46) As above, 8 mm wide at 54°.		19994					
							(202.94) 0-5% bn, traces cp over 2 cm.							
							(204.05) Traces bn along short, hairline fractures.							
201					bn (?)							201		
														.1
	W				py									
203			W		bn cp									
	M						(206.80 – 207.50) Local traces bn diss specks and short hairline vlts.		20297			204		
205	W						(206.90) Speck cp 1 mm across.	2						<.1
	M	M	W	M	py				20604					
207	W	M			bn cp	△						207		

HOLE NO.: | PROJECT: | PAGE NO.: 16 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
207	W	M		W	bn py	X	(207.81) 0.5 % bn over 1 cm.		2				207		
		M					(208.02) Few specks bn.								
					bn		(208.60) Speck moly.								
							(209.24) Traces bn within hairline py v/lts at 40°.								
209	W	W	W		no py	py	(209.78–210.17) Numerous hairline py v/lts at 55–70°.			209.09					
		W					(210.65–212.80) Local traces black mineral (? bn).						210		
				M			(212.25) Py v/lt 2 mm wide at 80°.								
	W	W		M											
211				M		py	(213.80) Fault. Mud and finely broken core 4 mm thick								
		W		M		qtz	on irregular fracture subparallel c.a.								
			M	M						212.19					
		M	W	M		py	(214.63) Grey qtz v/lt 4 mm wide at 50°.								
213							(215.41–215.64) Lato breccia with tuffaceous matrix 5%; clasts 95%. Upper contact at about 45°.						213		
	W			W			(215.86) Fault. 6 mm pale grey mud and finely broken core at 66°								
							(216.03) Fault. 4 mm mud at 40°.								
215							(216.70) 0.5 mm py v/lts at about 55°.			215.19					
			W	M	py		(217.60) Fault. 3 mm mud at 40°.						216		
							(218.10) 3 mm light grey qtz v/lt subparallel c.a.		1						
217							(218.33) Amethyst as irregular v/lts to 1.5 mm wide, 5 mm long. Traces								
										218.24					
						qtz py	(219.17) Grey qtz v/lt 4 mm wide at 40°		2						
219			W	M	py		(219.40) py v/lt 3 mm wide at 45° offset by wispy hairline pyritic fracture subparallel c.a.						219		

HOLE NO.: | PROJECT: | PAGE NO.: 17 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
219		W		W	py		(221.12) Fault. 7 mm finely broken core and mud at 10°.		1-2				219		
221		W	W	W			(222.30) Fault. 3 cm mud and finely broken core at 80°.			22/28					
			W				(223.46 - 230.38) Light brownish grey albitized (?) interval with local weak clay mineral, moderately pyrophyllite and sericite. Light brownish grey to light grey weak to locally moderate albite continues below 230.38.						222		
223				W											
225			W		py		(225.00 - 225.68) Late breccia with about 50% siliceous clasts, pyritic and wacke (?) matrix; upper contact at 40°.			22433			225		
							(226.58) Fault. Broken core on slip at 39°.								
227							(227.90) Fault. 3 cm finely broken core and mud at 70°.								
		M	M		py		(228.59) Quartz (98%) - py (2%) vein 7 mm wide at about 15°.			22738			228		
				W											
229							(230.01 - 230.36) Fault zone. Broken core and mud on slips at 30°.								
							(230.93) Fault. slip at 38°.								
			W	W			(231.52) Light grey qtz vlt 3 mm wide at 42°.			23043					
231							(231.94) Fault at 10°.						231		

HOLE NO.: | PROJECT: | PAGE NO.: 18 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
231				M			(232.23) Fault. 7 mm mud and finely broken core at 22°.		2				231		
			W		py		(232.63) Moderately silicified with 3% wispy py vlts over 5 cm above probable healed fault slip at 42°.								
		M		W			(234.97) Fault. Slip at 39°.								
233							(235.43) Traces bn within py vlt.			233.48					
							(235.50) " bn specks.						234		
235			W	W	py		(236.63 - 236.69) Fault. 7 cm mud between slips at 57.								
					bn		(237.20) Fault slip at 53°.								
							(237.67) Fault slip at 62°		2	236.52					
237				M			(237.98) Fault slip at 32°.						237		
			W			Δ	(238.18) Py band 6 mm wide at 70°.								
				M		Δ	py (238.68) " " 5 " " at 77°.								
							(239.40 - 239.51) Fault. Moderately to finely broken core								
239			W				(240.89) Fault. 2-5 cm mud and finely broken core at 28°.			239.27			239		
							(242.00) Fault. 12 mm finely broken core and mud at 55°.		1				240		
			W				(242.04) Light grey qtz vlt 6 mm wide at 30° contains py and bn (5%) traces		2						
241															
	M	W	W		py bn (5%)		qtz (243.65) Fault. 13 mm grey, pyritic mud at 32°			242.32					
243													243		

HOLE NO.: 1 | PROJECT: | PAGE NO.: 19 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: propylitic	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
243												243		
					py	/	(244.37) Fault. 4 mm finely broken core and mud at 25°.	2						
							(244.54) Traces bn as fine specks over few cm.							
		W			bn		(245.20) 2 tiny specks moly(?)							
245					moly(?)		(245.36-245.58) Traces bn as tiny specks							.1
		W			py		(245.58-245.93) MAJOR FAULT. Grey to dark grey pyritic mud and finely broken core between slips at 40°.		245.36					
		M												
			W	M			(245.98) Trace bn specks.					246		
247							(246.52-246.62) Fault. Moderately to finely broken core and mud at 36°.	<1						
			W	M		Δ	(248.56) Red hematite lining fracture at 33°.	z						
					py		(248.90) Fault. 5 mm off-white mud on slip at 32°.		248.56					
249		W		W			(249.04) Py vlt 5 mm wide at 35°.					249		
							(249.87-253.30) Moderately broken core.							
						Δ	(251.21-251.28) Fault. Finely broken core and mud at 50°.	1						
							(251.81-251.93) As above at 66°.							
251							(252.89-253.21) As above at 50° (upper contact) and 43° (lower).							
						X Δ	py		251.61			252		
			W											
253			W			Δ								
			W											
			W											
			W											
255									254.6			255		

HOLE NO.: E 175 | PROJECT: | PAGE NO.: 20 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: | N. | E. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
255												255		
		W	M	M	py		(256.95 – 258.89) Moderately to finely broken core with local fault mud. Faults at 30° at 256.97, 60° at 257.08, 75° at 257.98, 45° at 258.74.	1						
				M										
257							(259.57 – 261.23) As above; 50° at 259.63, 40° at 259.77.							
				M			(259.90) Irregular py vlt 1.5 mm wide subparallel c.a.		257.86			258		
				M										
259				M								109694		
			W	M		py								
				W			(261.40) Fault. 8.5 cm finely broken core and mud at 80°.							
261							(262.14) As above. 6.5 cm at 70°.		260.91			261		
				M			(263.53) Fault at 75°.							
				W										
263				M			(265.14) Py vlt 1 mm wide at 32°.							
			W	W			(265.18) 1% black sulphide (chalcocite?) as specks over 2 cm.		263.96			264		
								2						
265	W	M		W		py	(265.46) 0.5% bn(?) along fracture at 30°.	<1						
					ch(?) bn(?)	bn(?)	(265.76) Fault at 28°.							
			W	W										
267							(267.96) Pale grey qtz vlt 5 mm wide at 25°.		267.00			267		

HOLE NO.: 5 | PROJECT: | PAGE NO.: 21 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
267			W	W	py		(268.04) Fault. 6 cm finely broken core and mud at 65°.		1	267			267		
				W			(269.13) As above; 6 cm at about 50°.								
269			W	W			(269.49) Light grey greywacke interbed 3.3 cm thick at 48°.								
							(269.67) Fault. 4 cm at about 43°.								
			W	M			(270.02 - 270.19) Fault zone at about 40°.			270.05			270		
			W												
271			W				(272.10 - 272.21) Fault zone at about 48°.		2						
		W			py		(272.80 - 274.02) Moderately broken core								
		W	W	W			(273.20) Fault at about 65°.								
273							(273.35 - 273.52) Fault zone at 50°.		1	273.10			273		
				M											
			W	I			(273.64 - 273.89) Fault zone at 32°.								
					py		(275.44 - 276.32) Moderately to locally finely broken core.								
275				W			273.89 - 311.57 PYROPHYLLITE - ALBITE(?) TUFF.								
							Light brownish grey, fine to medium grained, likely altered (only local traces chlorite) andesitic			275.99			276		
			W	M			tuff. Massive, homogeneous rock with only local			276.15					
				M			faint banding. Slightly harder and more grey-coloured								
277		W		W			than pyrophyllite tuffs logged in other holes.								
							(275.80) Minor fault subparallel c.a.			277.98					
							(276.05) Fault. 4 cm finely broken core.								
279							(278.10 - 281.06) Moderately to locally finely broken core.						279		

HOLE NO.: C-175 | PROJECT: | PAGE NO.: 22 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER: 248

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	silica	sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
279	M		W	M	py	•	(278.38) Fault. Finely broken core and mud over 4 cm at 28°.		279.20			279		
	M						(278.72 – 279.13) Fault zone. Finely broken core and mud at 50°.	1		26		34901		
	W						(279.20 – 281.02) G.C.; 26% recovery							<.1
	W						(279.30) Soft, waxy mineral (gypsum?) on fracture at 17°.							
281	W				moly(?)		(279.40) Fault. 1 cm finely broken core and mud.		281.02			282		
	M				py		(281.41) Speck moly(?).	2						
					bn		(282.00 – 289.78) Traces very finely diss bn and chalcocite? throughout.							
283	M				moly		(283.47) Traces moly v. fine specks							.1
					cp		(283.57) Speck cp.		284.07			34902		
							(286.00) Pale grey quartz (90%) – py (9%) – sericite (1%) – bn (tr) vein 18 mm wide subparallel c.a.							
285	M			W			(286.10) Py vlt 2 mm wide at 35°.					285		
			W		py bn		qtz-py (287.12 – 287.66) Moderately broken core.							.1
	M						(288.80) Light greyish brown, fine grained greywacke interbed 5 cm thick at 25°.							
287	M		W				(289.78) 1 : 0.5 mm wide white sericite vlt at 20°.		287.12			288		
	M		W	W			(290.61 – 291.82) Local traces bn.							
			W											
289	M		W	W			(292.65) Traces bn as specks.							.1
	M						(290.29) Py vlt 1.5 mm wide at 13°.		290.17					
291												291		

HOLE NO.: E 175 | PROJECT: | PAGE NO.: 23 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
291	M				py bn		(293.39) Irregular py mass about 30 mm x 5 mm. (294.72) As above; along margin irregular qtz vein.		2				291		
293	M				py					293.22					
	M		W				(294.90) 8% py over 4 cm as irregular, diss masses up to 2.5 x 1 cm across. Traces bn						294		
295	M	M	W W	W W	py bn		(295.39) Py vlt 2 mm wide at 11° (295.59) Pale greenish, translucent, soft gypsum? 1 mm wide on fault slip at 45°			295.96					
	M						(295.74) Speck molybdenite. (296.05) Slickenside on fracture at 51°. (296.35) Traces moly?						297		
297	M		W				(298.29) Pale grey qtz vlt 4 mm wide at 37° soft pyrophyllite?		3	297.98					
299	M		W				(300.36) Hairline to 1 mm py vlts at 26°.						300		
	M				py		(302.20) Fault. 1 cm pale grey mud on slip at 57°.			300.53					
301	M						(302.31) Py band 6 mm wide at 40°. (302.39) Py band 1 cm wide at 47°. (302.84) Py band 1.3 cm wide at 50°.								
303	M		W	W	py								303		

HOLE NO.: E-175 | PROJECT: | PAGE NO.: 24 OF

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
303													303		
	M				py		(303.72) Faint band (? bedding) 3.5 cm wide at 37°.		3						
							(304.79-305.43) Moderately brecciated, intensely silicified interval with short, irregular py vlts below 305.10.		1	303.58					
	M						(305.26) Vugs to 14 mm across.								
305		I	W	I			(305.92) Brownish, soft, translucent pyrophyllite (97%) - py (3%)			305.10			306		
	M						py vlt 8 mm wide at 25°.								
							(306.24) watery pyrophyllite (95%) - py (5%) vlts to 3 mm at 42° and 30°.								
	M						(306.68-307.35) Moderately broken core.								
307		M		M			(307.34) Py vlt 1 mm wide at 26°.								
	M						(307.71) Py vlt 2.5 mm wide at 25°; offset 5 mm by fracture at about 50°.		2	307.54					
	M						(308.61-311.20) Somewhat to moderately broken core.						309		
309										309.07					
	M						(309.56) Py vlt 5 mm wide at 20°.								
							(310.70) Pyrophyllite (65%) - py (35%) vlt 6 mm wide at 15°.								
	M						py, py (310.94) Fault. 4 cm pyritic mud and soft, finely broken core on slip at 45°.								
311	W														
	W		W	W			py, ser. 311.57-316.43 ANDESITE. : Green-brown, fine to very fine grained. Dark green chlorite clots to few mm across in weakly to moderately pyrophyllitized, soft matrix. Gradational contact over about 0.5m with overlying pyrophyllite tuff. Andesite marked by presence of chlorite clots and darker colour of core.		1	311.20			312		
	M			M											
313				M						312.72					
	W			M											
	M			W	py										
315				W									315		

HOLE NO.: 75 | PROJECT: | PAGE NO.: 25 OF
COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REF. TO CLAIM CORNER:
COORDINATES: | N. | DATE FINISHED: | SCALE:
INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
315							(312.50) Lmnt(60%) - py(40%) vlt 1 mm wide at 20°.					315		
	M				py		(314.21) Slip at about 55° to c.a.; sericite on frac. sfcs.	1	315.78					
	M		W	W			(315.00) Late bx band 3.5 cm wide with pyritic matrix at 75°; intensely pyrophyllitized over 5 cm at both upper and lower contacts.							
317						py	(315.97) Sericite along fracture sfcs at about 45°.							
	M				pyp		316.43 - 323.50 PYROPHYLLITE TUFF Light greyish brown, fine to medium grained, generally as for 273.89 to 311.57 except here rock softer with lower albite content. Major fault zone below 321.17 marked by soft, intensely fractured, often finely broken core. Sericite and pyrophyllite line fractures within fault.	2				318		
	M													
319	W		W	M		qtz+py		3	318.82					
							(317.06) Py vlts to 2 mm wide at 13°.							
	M		W	M	py		(317.40) Pyrophyllite greenish, soft, waxy vlt 3 mm wide subparallel							
			W				(318.27-319.23) c.a. 1% dk. green chlorite clots to few mm.	1						
321	M		W	M			(318.73) Fault. 2 cm finely broken core on slip at 32°.					321		
			W	I			(319.56) Brown qtz(90%) - py(10%) vlt 6 mm wide at 30°.							
	M		W	I			(320.23) Fault. 4 cm finely broken core and mud at 53°.							
			W	I			(321.17) Fault slip at 36°.		321.87					
	W		W	I			(321.92) Fault slip at 43°.							
323		M		I			(322.18) Fault slip at 70°.							
	W			M			(322.72) Fault slip at 42°.							
				I			(322.82 - 323.00) Mud and finely broken core; slips at 50° at 322.82 and at 35° at 323.00.					324		
	W			M			(323.46) Fault slip at 50°							
325							(323.56) Hairline py vlt at 64°		324.92					
	M				py		323.50 - 325.36 ANDESITE As for 311.57 - 316.43. Discrete upper contact at 53°. Moderately to finely broken core.							
	M			M				1						
327	W		W	I			(324.18) Fault. 3.5 cm mud and finely broken core at about 35°.					327		
							(324.30) Fault slip at 73°							

HOLE NO.: 75 | PROJECT: | PAGE NO.: 26 of 26

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: | SCALE:

INCLINATION: | BEARING: | TOTAL DEPTH: | LOGGED BY:

SECTION	ALTERATION: pyrophyllite	ALTERATION: silica	ALTERATION: sericite	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED % Cu
327	M			M		/	(324.94) Fault. 3 cm mud and finely broken core at 55°.		1	327.05			327		
				I			(325.13) Fault. 12 cm mud and finely broken core at about 50°								
				M			325.36 – 338.33 PYROPHYLLITE TUFF Light grey-brown, fine grained; less pyrophyllite than tuffs higher in hole and harder. Local banding. Appears gradational between pyrophyllite tuff and greywacke. Somewhat to moderately broken except above 329.49 where rock often finely broken by faults.		<1						<.1
329	M	W		M	py										
				I						329.49					
				W									330		
				W		py	(325.95) Fault. 8 cm mud and finely broken core at 60°.								
331	M						(326.37) Fault slip at 80°.								
				W			(326.54) " " " 65°.								
		W		W			(327.43 – 327.71) Fault. Mud and finely broken core at about 40°.								
						pfp	(329.48) Fault. 2 cm mud and finely broken core at 30°.			331.47					<.1
				W			(330.18) Banding at 22°.								
333	W						(331.29) Irregular py vlt 2 mm wide at about 60°.								
				W			(331.42) Fault. 4 cm mud between slips at 66°.		<1						
	M	M	W	M	py		(331.70) Pyrophyllite (60%) – py (40%) vlts 7 mm wide at 70° and 90°.			332.84			333		
					mag										
	M		W				(333.45) Intensely silicified over 9 cm with 3% diss py.		3				#34919		
				W		Δ	(333.70) Banding at 56°.								
335	W				py		(333.78) Fault. 2 mm mud on slip at 66°.								<.1
				W			(333.85 – 334.04) Faint maroon colour; trace mag			335.28					
	M						(334.02) Irregular, hairline sericite vlts at 50° and 62° from 2% rock.						336		
				W			(334.50) Fault. 1 cm pale grey mud on slip at 15°. 3 pyrophyllite vlts 5 mm wide.		<1				#34920		
337	W				py					336.80					
				W			(337.00) Py (60%) – pyrophyllite (40%) vlt 3 mm wide subparallel c.a.								<.1
	M	W	W	W		Δ	338.33 END OF HOLE			338.33					
339													339	33	

Drill Core Data For Hole EC-175

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
27.43	30	27317	998	34	165	< 0.5
30	33	27318	373	17	140	< 0.5
33	36	27319	46	26	180	< 0.5
36	39	27320	182	37	200	< 0.5
39	42	27321	99	93	130	< 0.5
42	45	27322	46	166	180	< 0.5
45	48	27323	65	155	160	< 0.5
48	51	27324	98	56	390	0.5
51	54	27325	1355	53	300	< 0.5
54	57	27326	1020	45	180	< 0.5
57	60	27327	344	61	365	< 0.5
60	63	27328	530	72	395	< 0.5
63	66	27329	192	73	150	< 0.5
66	69	27330	68	76	195	< 0.5
69	72	27331	361	63	265	< 0.5
72	75	27332	1410	54	390	0.5
75	78	27333	934	72	285	< 0.5
78	81	27334	53	195	100	< 0.5
81	84	27335	147	146	315	< 0.5
84	87	27336	250	163	360	3.5
87	90	27337	987	175	220	< 0.5
90	93	27338	850	87	240	< 0.5
93	96	27339	1365	81	335	< 0.5
96	99	27340	680	313	200	< 0.5
99	102	27341	1145	112	175	< 0.5
102	105	27342	1110	94	250	< 0.5
105	108	27343	864	171	360	< 0.5
108	111	27344	603	123	245	< 0.5
111	114	27345	743	81	255	< 0.5
114	117	27346	433	70	210	< 0.5
117	120	27347				
120	123	27348	488	156	570	< 0.5
123	126	27349	400	118	560	< 0.5
126	129	27350	2640	210	500	< 0.5
129	132	109651	2870	281	535	< 0.5
132	135	109652	3070	227	415	< 0.5
135	138	109653	2656	268	555	0
138	141	109654	1646	156	180	0
141	144	109655	1358	168	135	0
144	147	109656	1847	185	95	0
147	150	109657	682	297	60	0
150	153	109658	314	272	135	0
153	156	109659	2833	153	115	0
156	159	109660	3522	127	175	0
159	162	109661	2972	149	240	0
162	165	109662	198	99	105	0
165	168	109663	317	123	85	0
168	171	109664	211	77	215	0
171	174	109665	1152	71	210	0
174	177	109666	684	64	205	0
177	180	109667	751	41	185	0
180	183	109668	415	39	115	0
183	186	109669	399	25	150	0
186	189	109670	270	20	75	0
189	192	109671	392	31	80	0

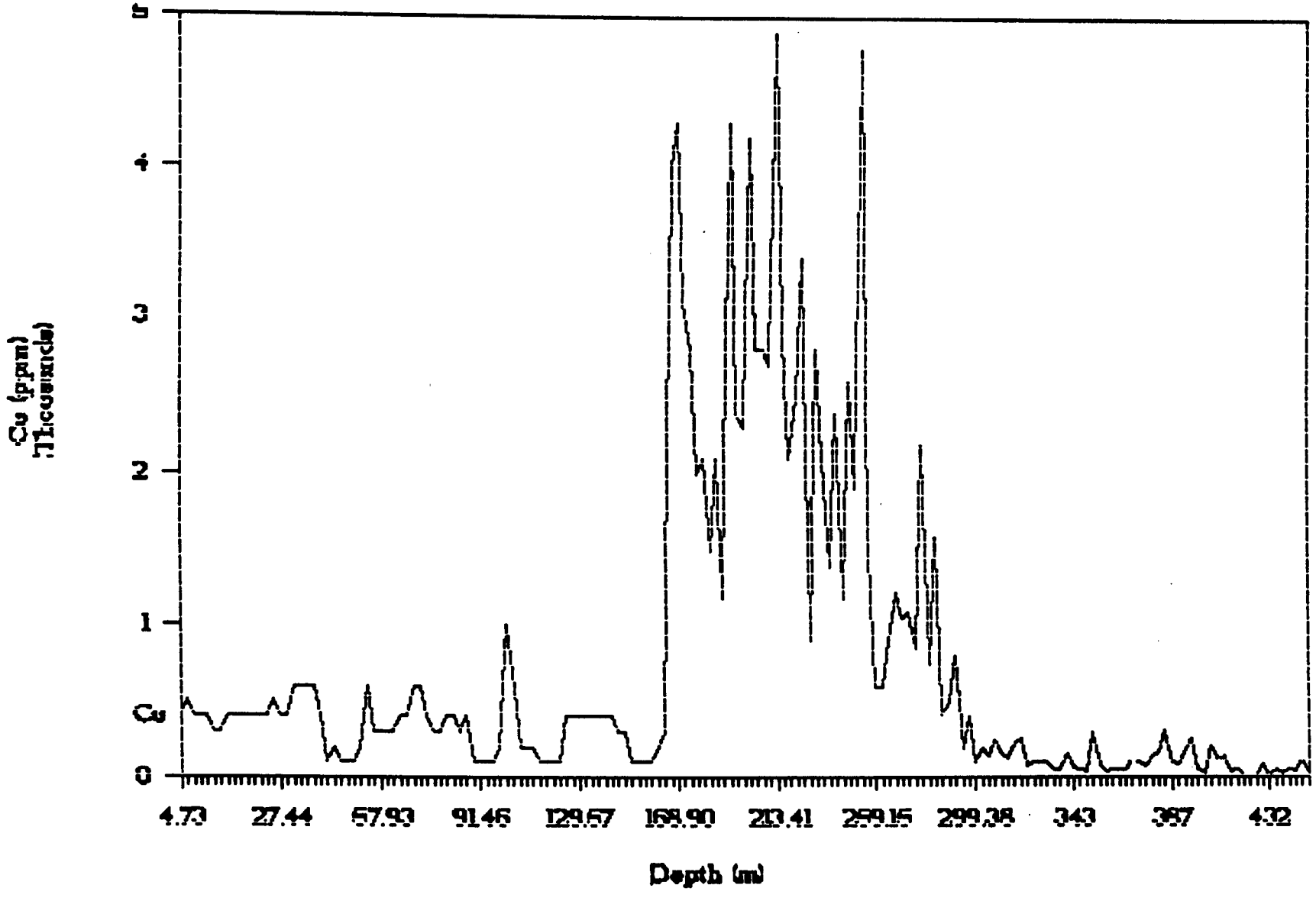
Drill Core Data For Hole EC-175

From (m)	To (m)	Sample	Cu (ppm)	Mo (ppm)	Au (ppb)	Ag (ppm)
192	195	109672	498	38	115	0
195	198	109673	359	36	120	0
198	201	109674	494	62	100	0
201	204	109675	758	107	110	0
204	207	109676	647	59	120	0
207	210	109677	530	29	115	0
210	213	109678	447	46	80	0
213	216	109679	449	51	165	0
216	219	109680	303	18	50	0
219	222	109681	131	47	50	0
222	225	109682	264	36	70	0
225	228	109683	387	25	115	0
228	231	109684	407	57	1160	0
231	234	109685	258	37	50	0
234	237	109686	219	42	65	0
237	240	109687	336	37	90	0
240	243	109688	184	38	40	0
243	246	109689	152	21	40	0
246	249	109690	247	34	25	0
249	252	109691	171	6	35	0
252	255	109692	401	37	55	0
255	258	109693	156	13	15	0
258	261	109694	111	9	20	0
261	264	109695	183	5	15	0
264	267	109696	184	98	20	0
267	270	109697	210	26	40	0
270	273	109698	327	7	45	0
273	276	109699	83	28	60	0
276	279	109700	65	27	45	0
279	282	34901	93	24	40	0
282	285	34902	57	0	20	0
285	288	34903	140	9	30	0
288	291	34904	122	8	40	0
291	294	34905	82	0	30	0
294	297	34906	91	1	45	0
297	300	34907	53	0	30	0
300	303	34908	166	0	40	0
303	306	34909	247	0	120	0
306	309	34910	461	0	60	0
309	312	34911	417	3	65	0
312	315	34912	129	0	30	0
315	318	34913	79	0	55	0
318	321	34914	57	0	30	0
321	324	34915	95	0	30	0
324	327	34916	83	0	30	0
327	330	34917	220	3	50	0
330	333	34918	38	1	15	0
333	336	34919	125	1	30	0
336	338.33	34920	91	0	25	0

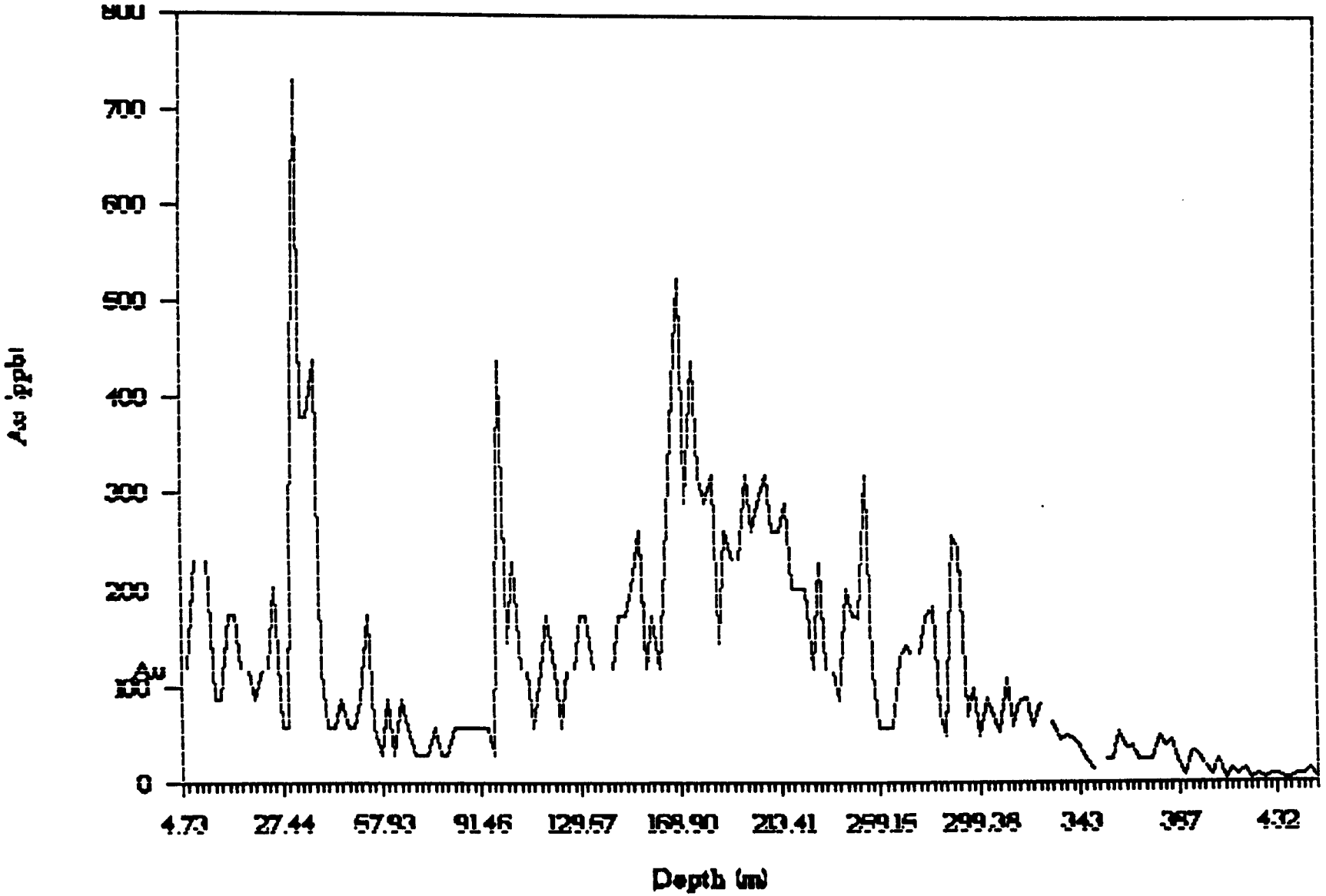
APPENDIX 4

DRILL HOLE GRAPHS

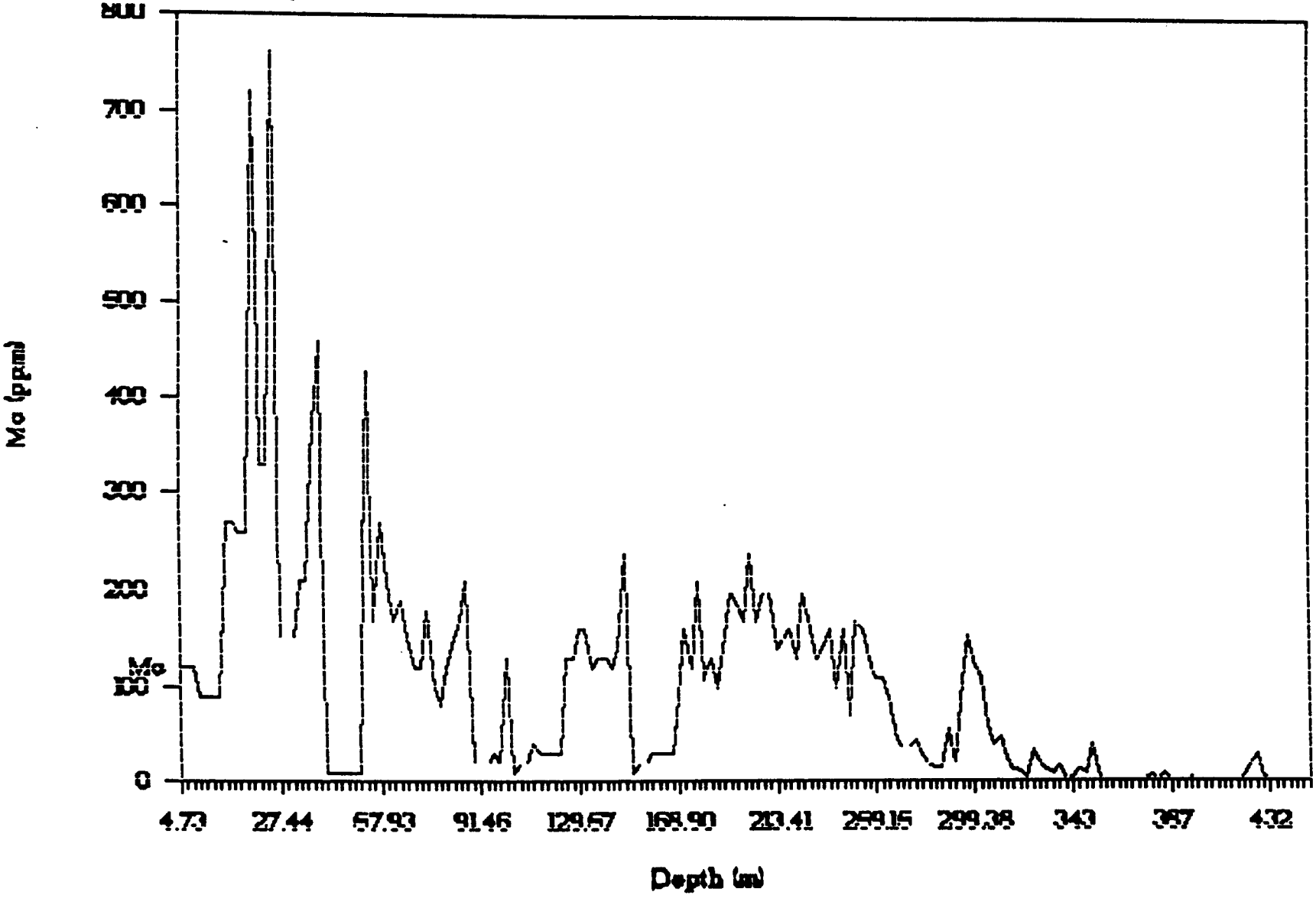
Copper Assays for Hole EC 154



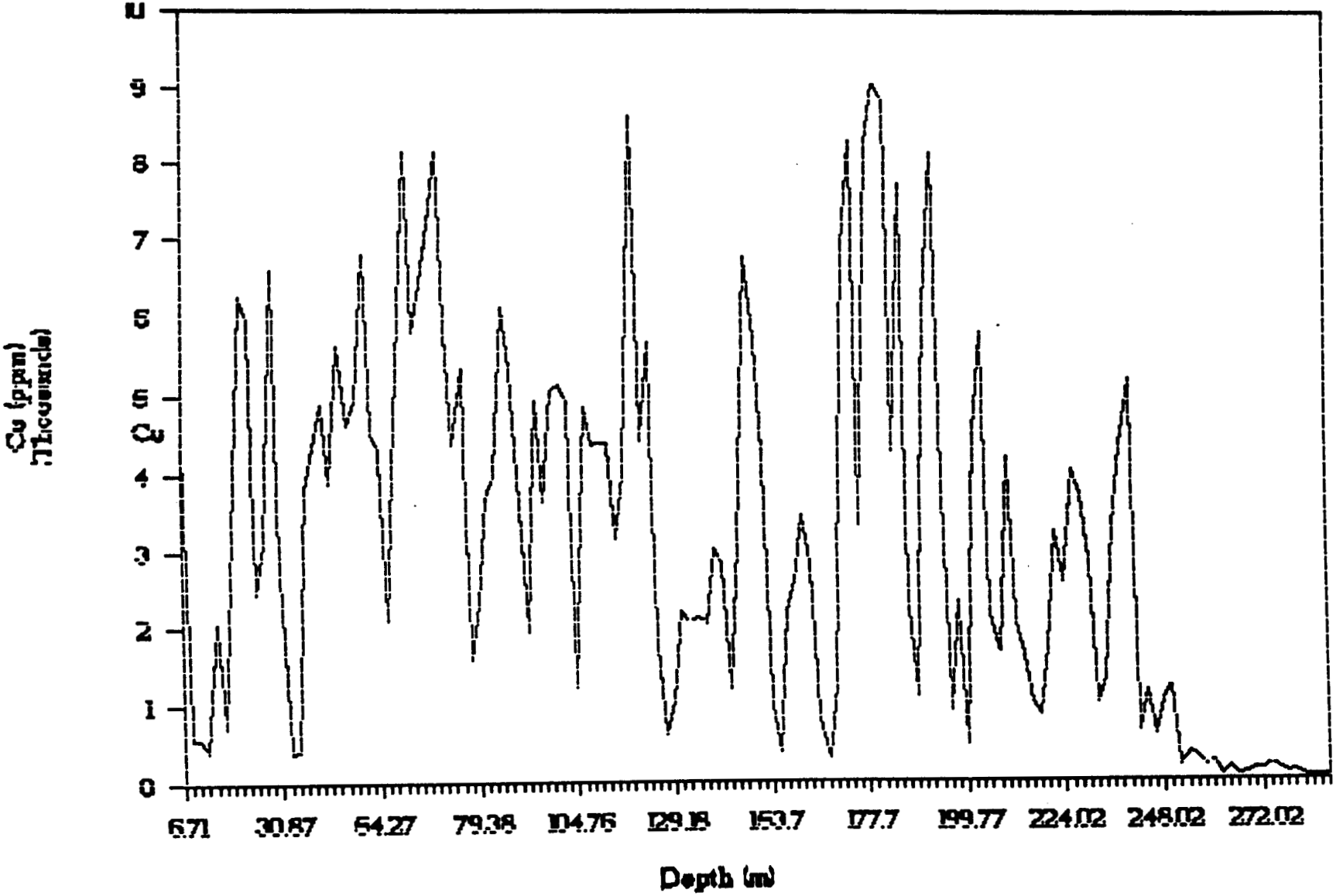
Gold Assays for Hole EC 154



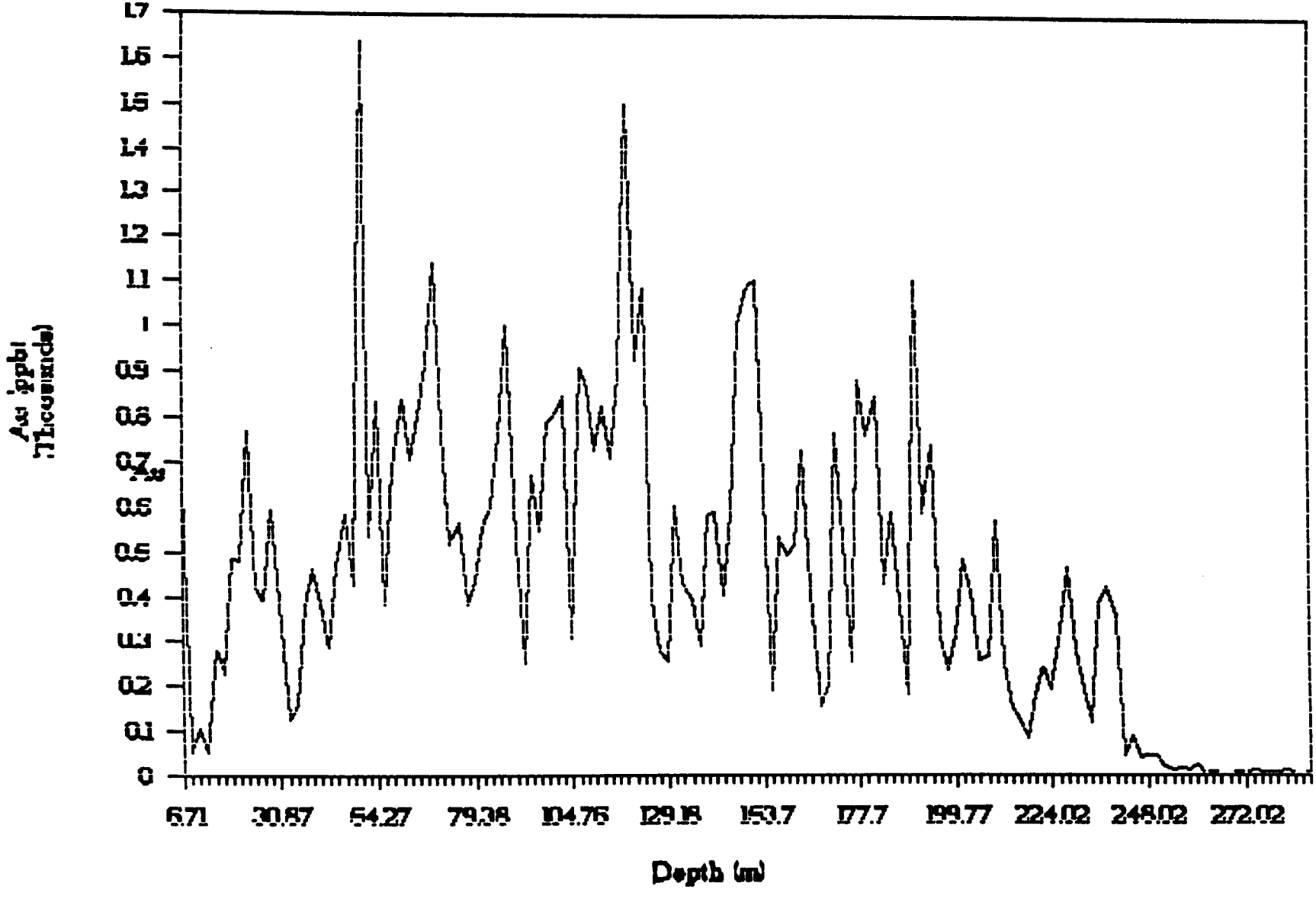
Molybdenum Assays for Hole EC 154



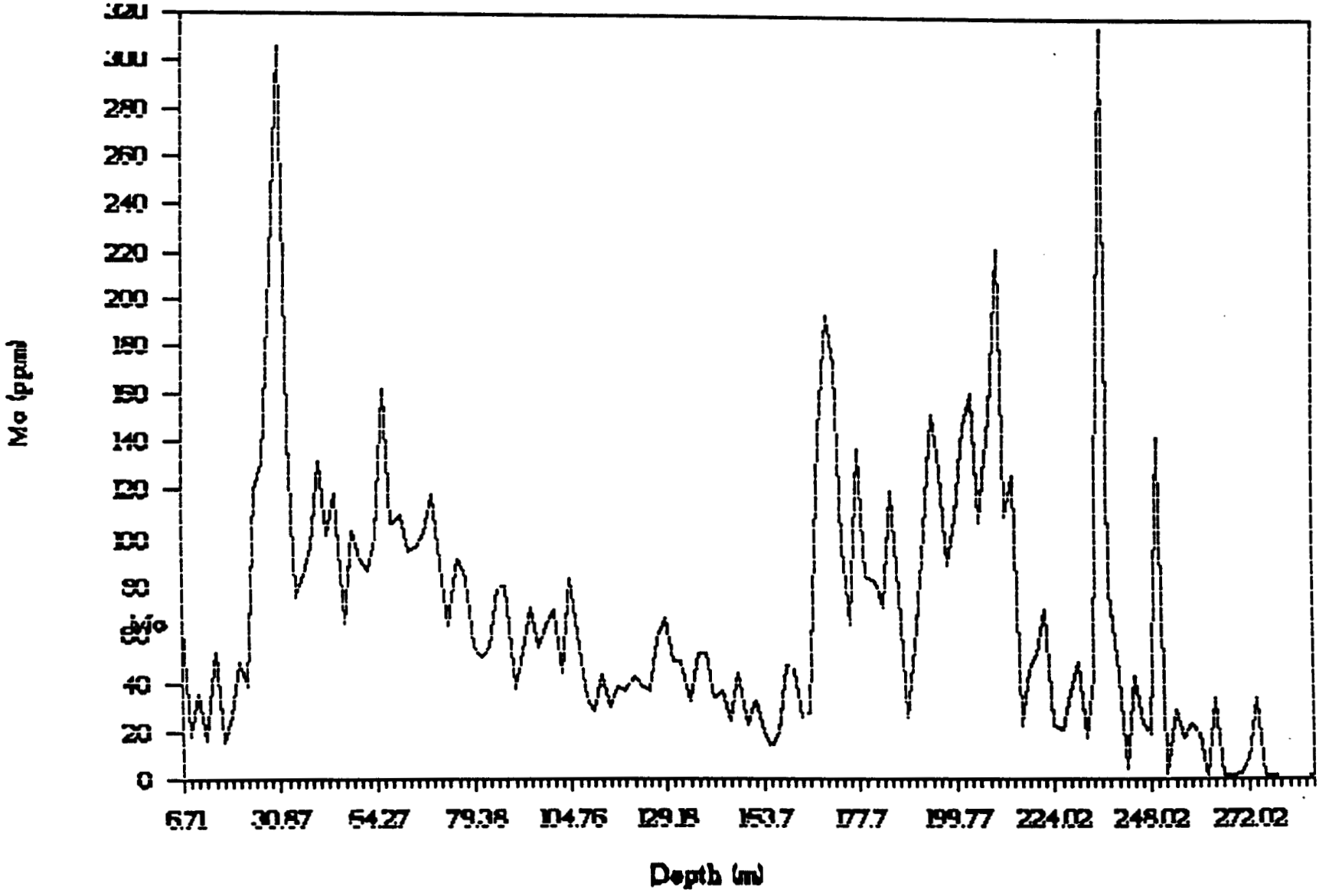
Copper Assays for Hole EC 171



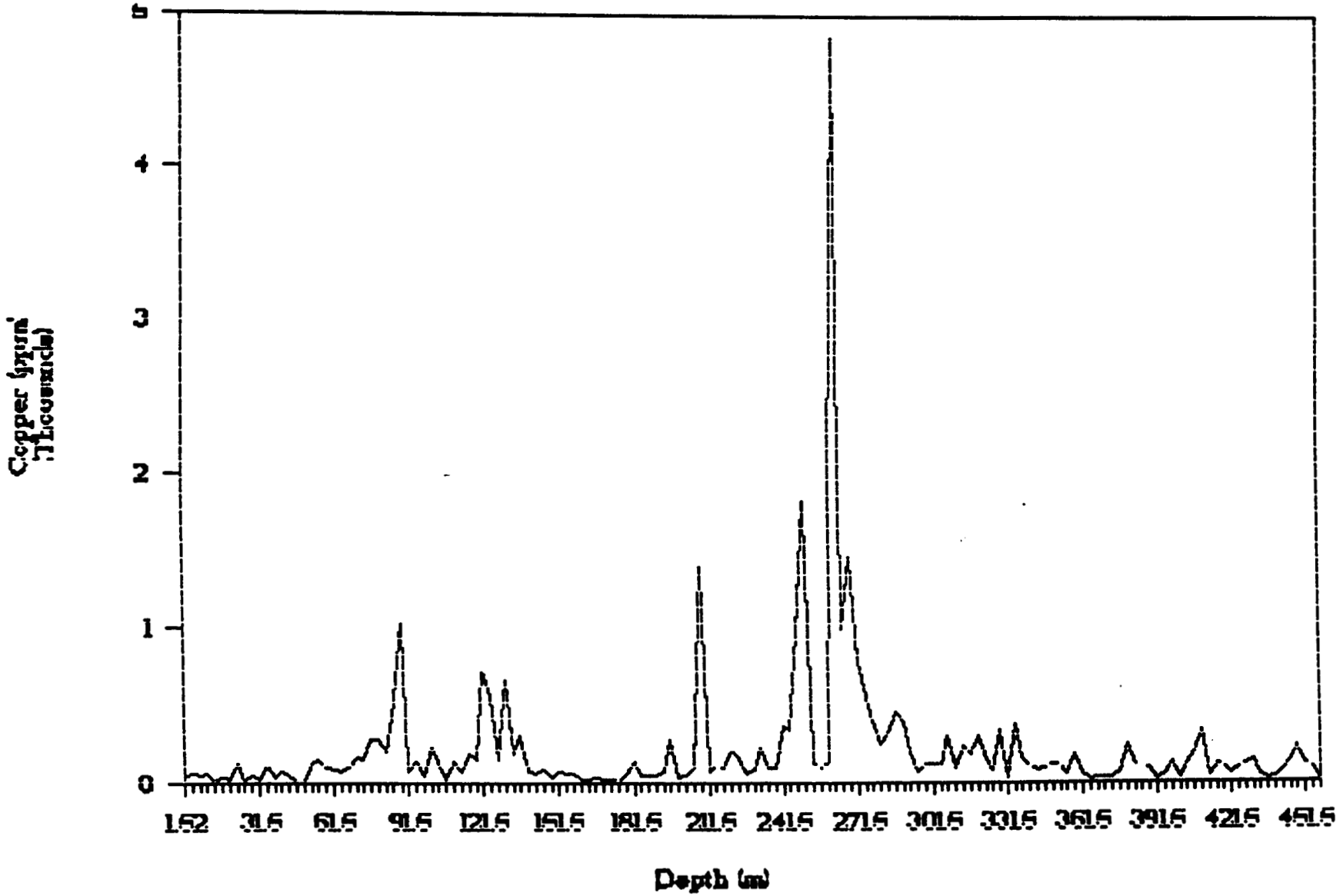
Gold Assays for Hole EC 171



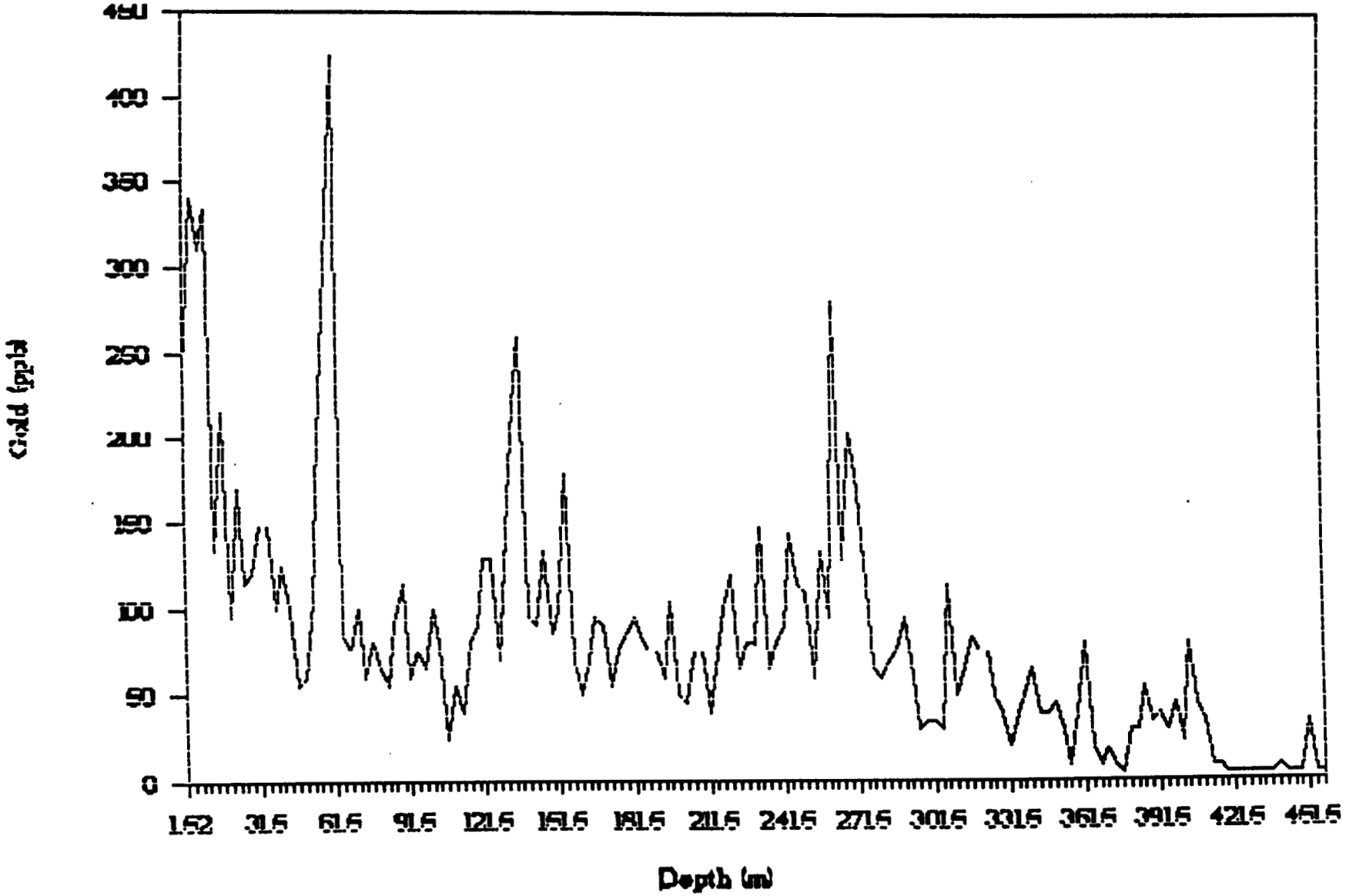
Molybdenum Assays for Hole EC 171



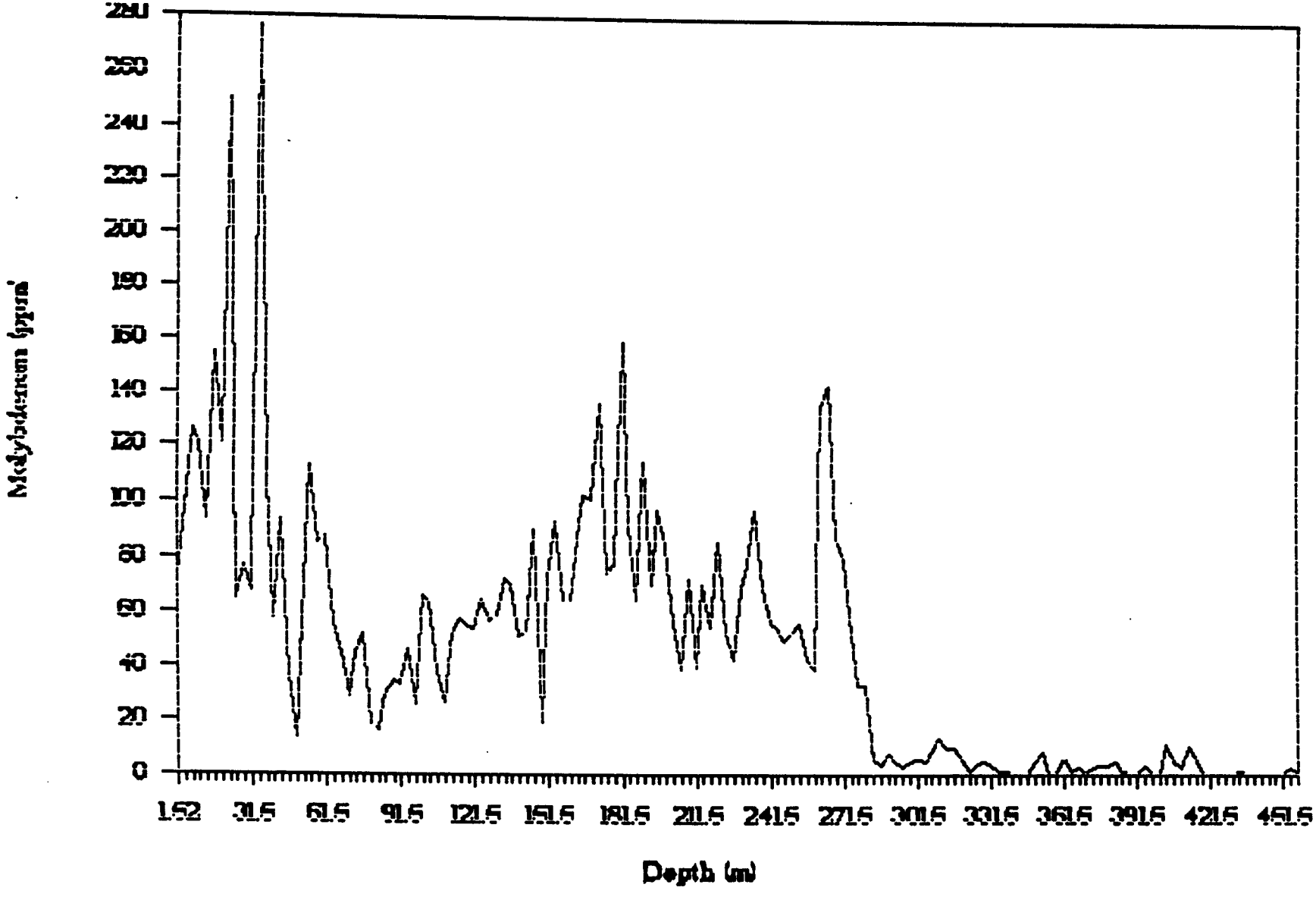
Copper Assays for Hole EC 172



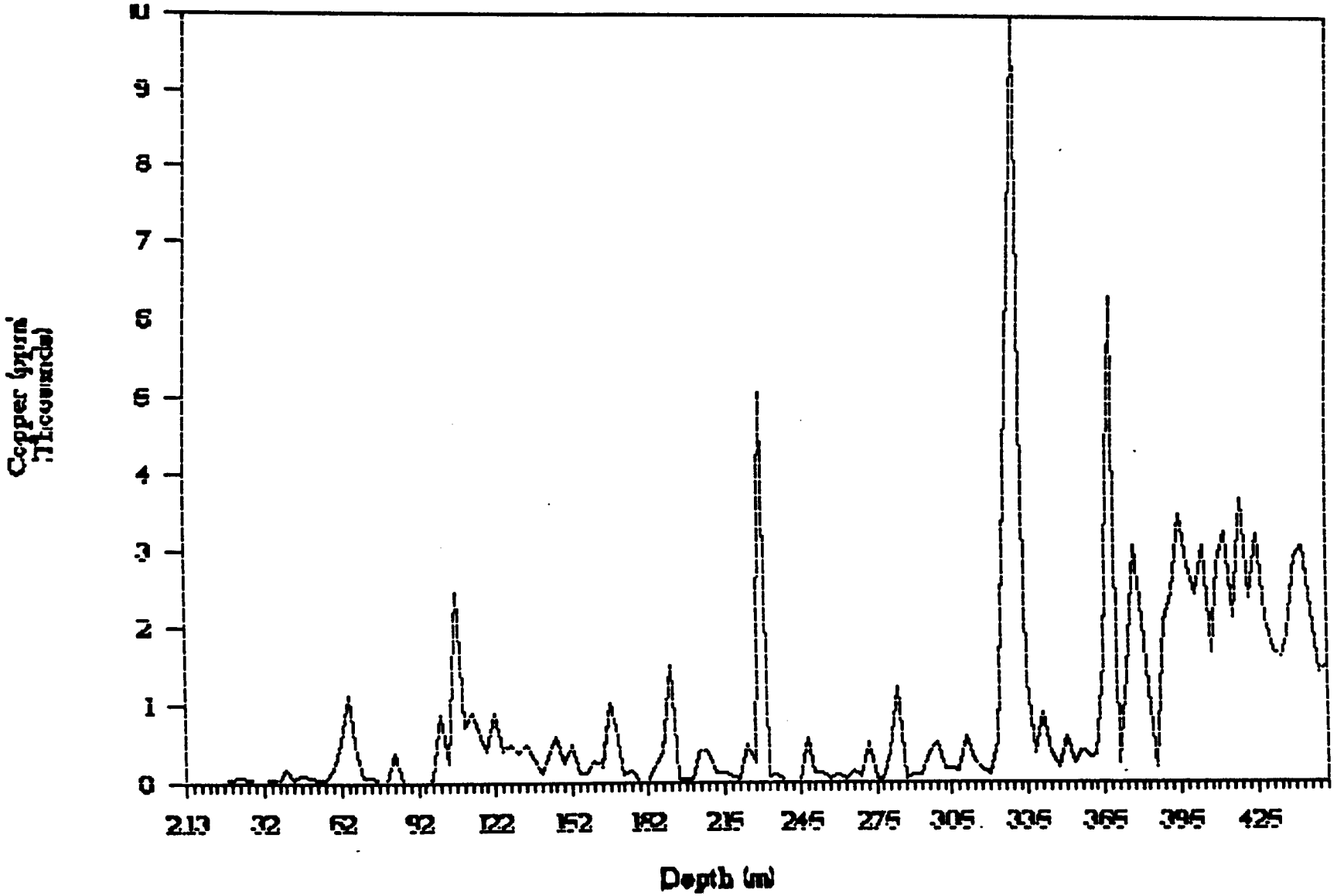
Gold Assays for Hole EC 172



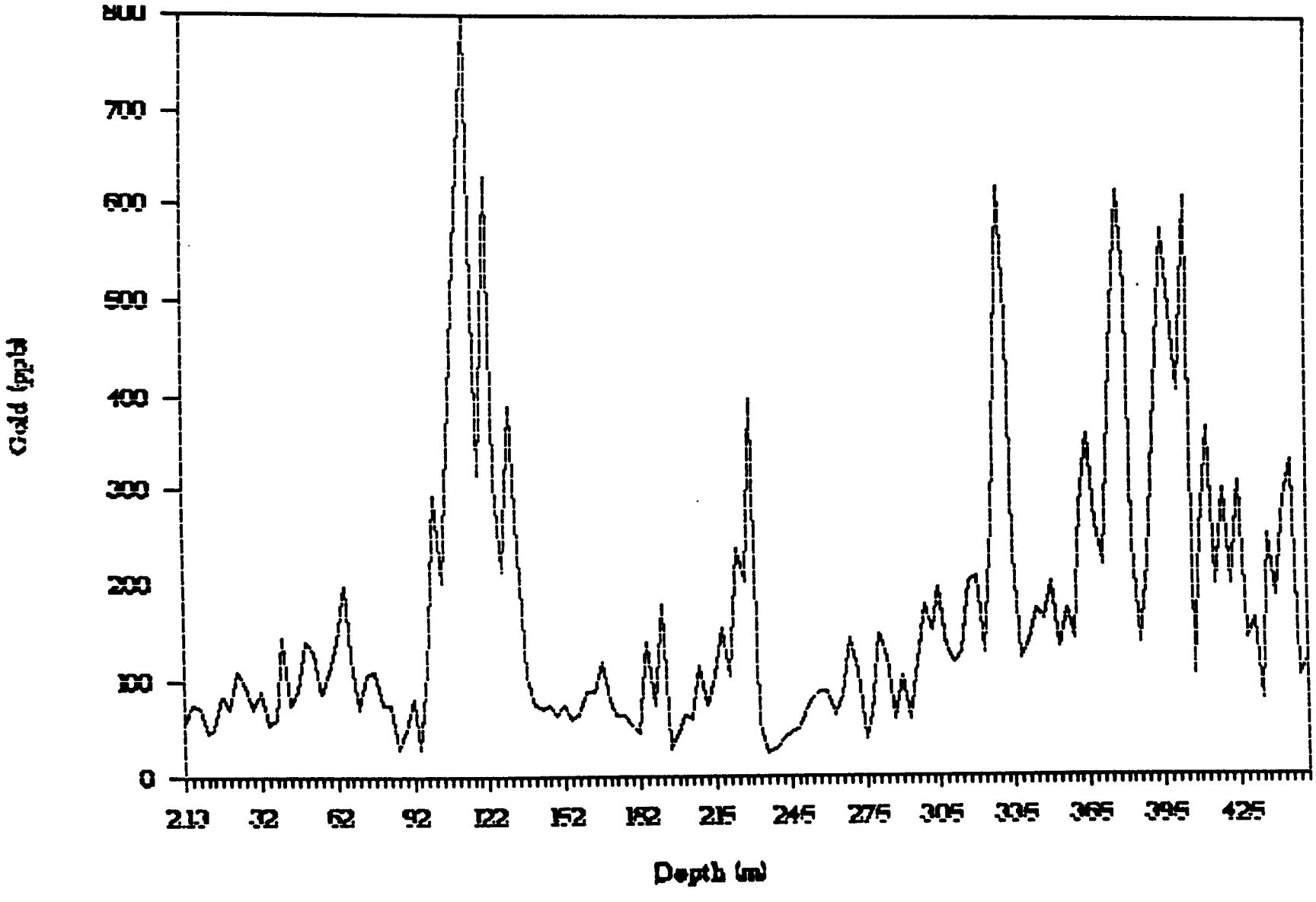
Molybdenum Assays for Hole EC 172



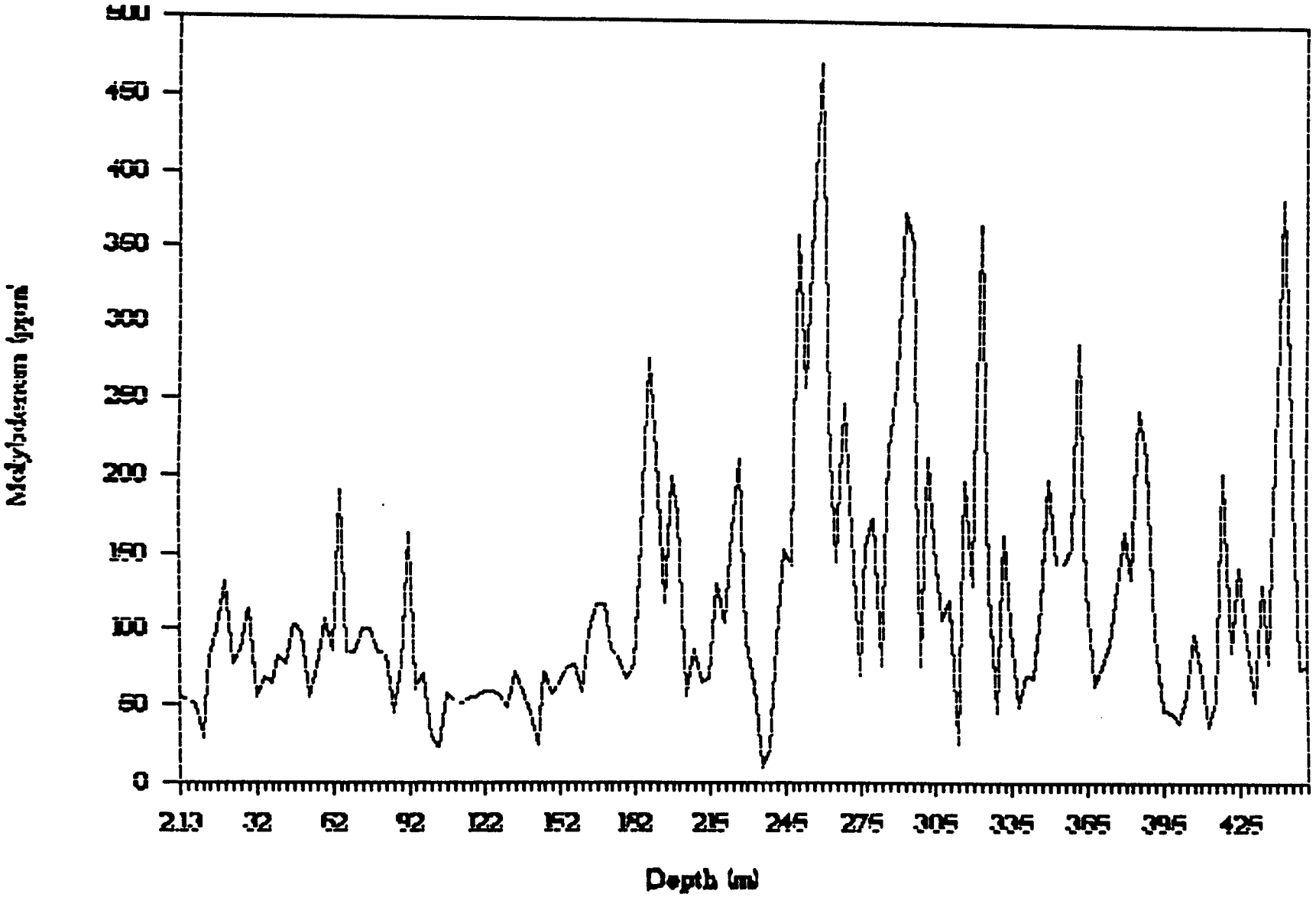
Copper Assays for Hole EC 173



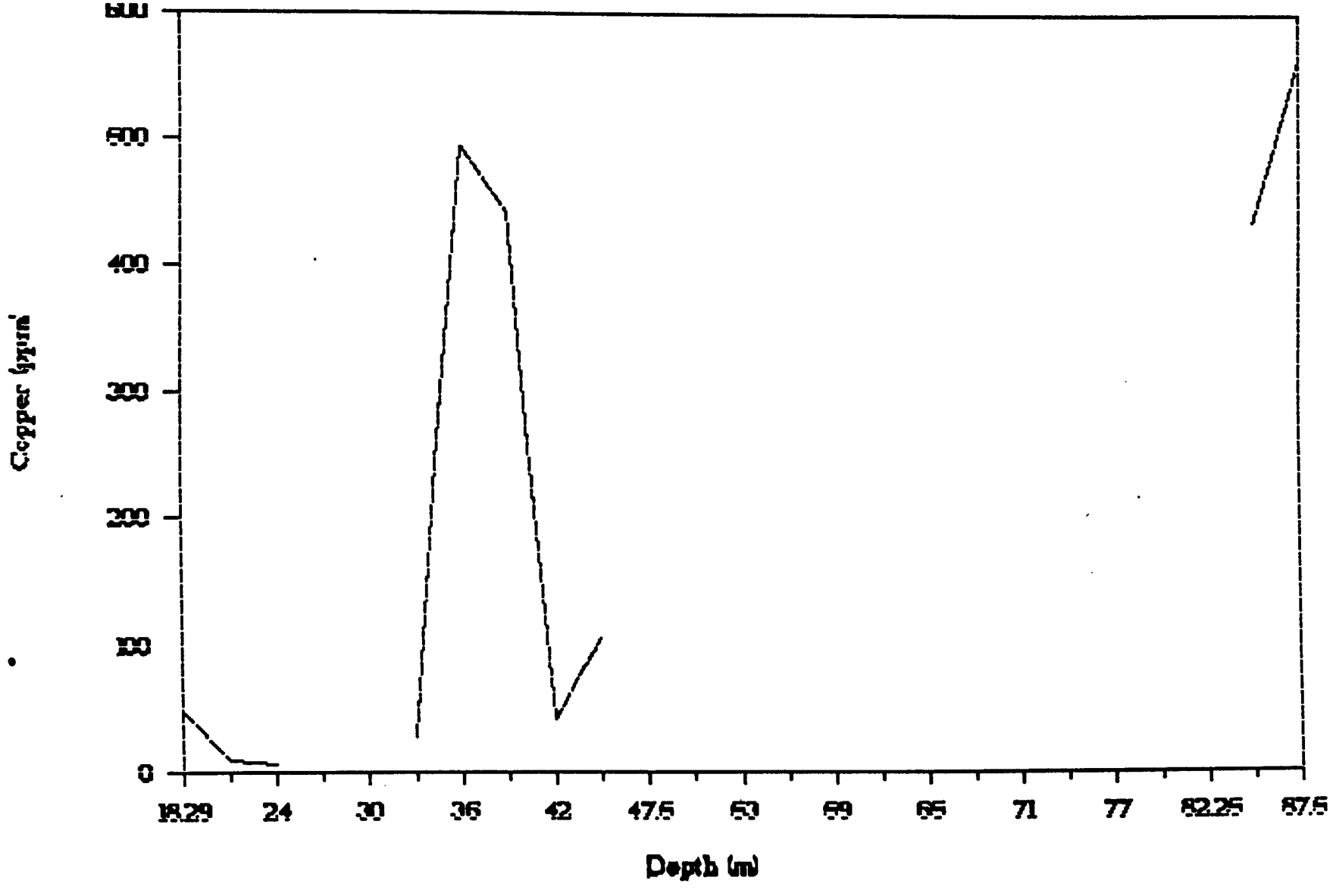
Gold Assays for Hole EC 173



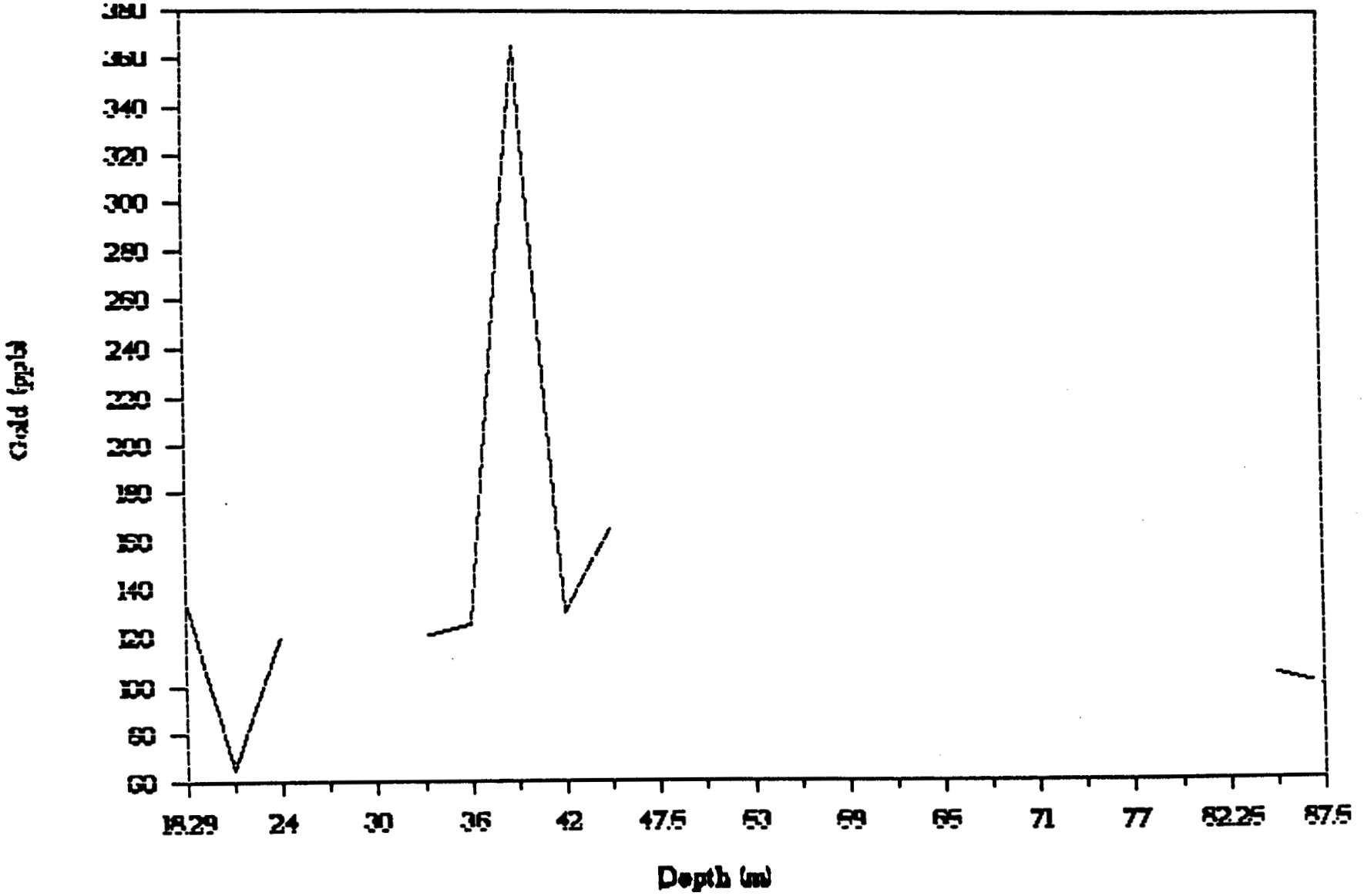
Molybdenum Assays for Hole EC 173



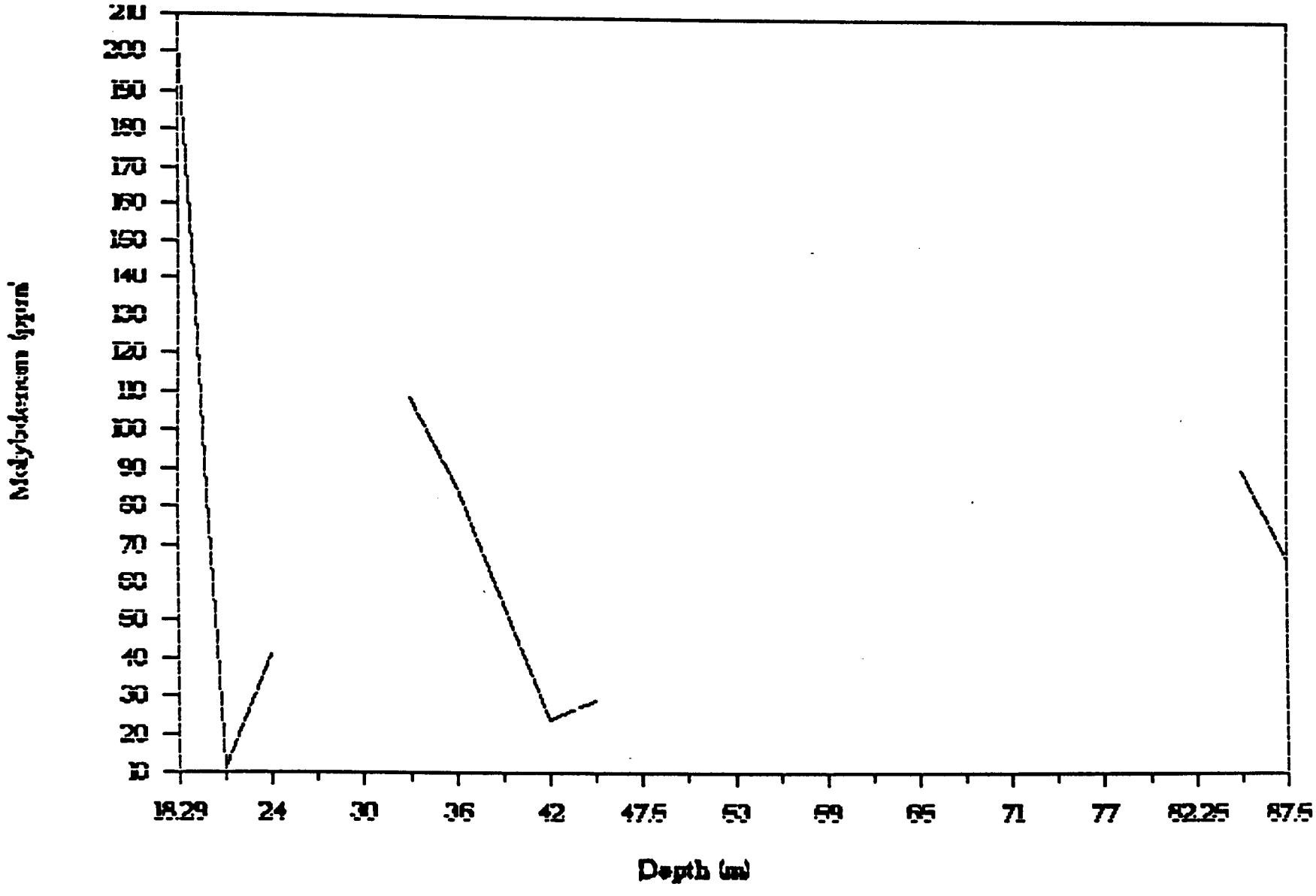
Copper Assays for Hole EC 174



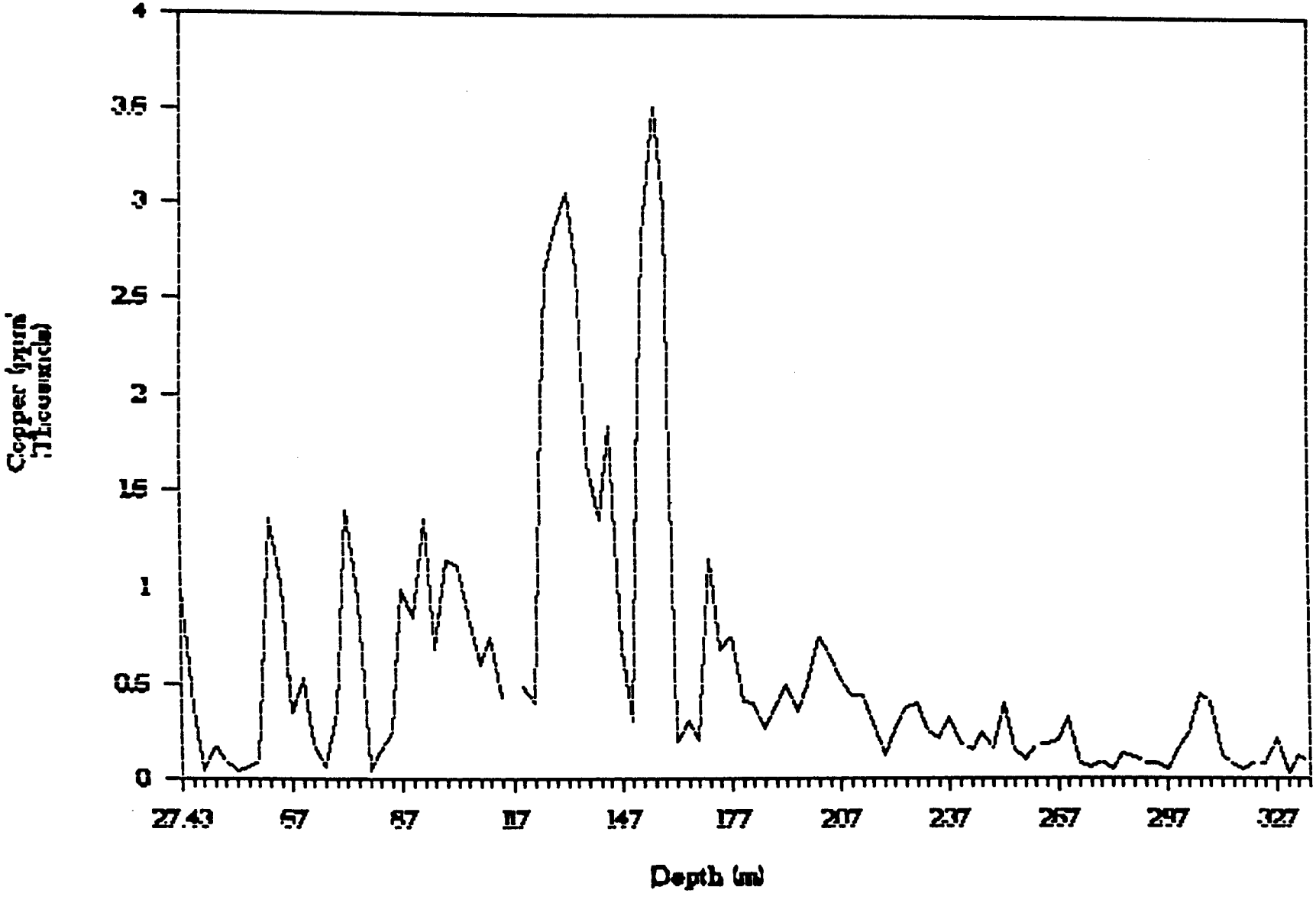
Gold Assays for Hole EC 174



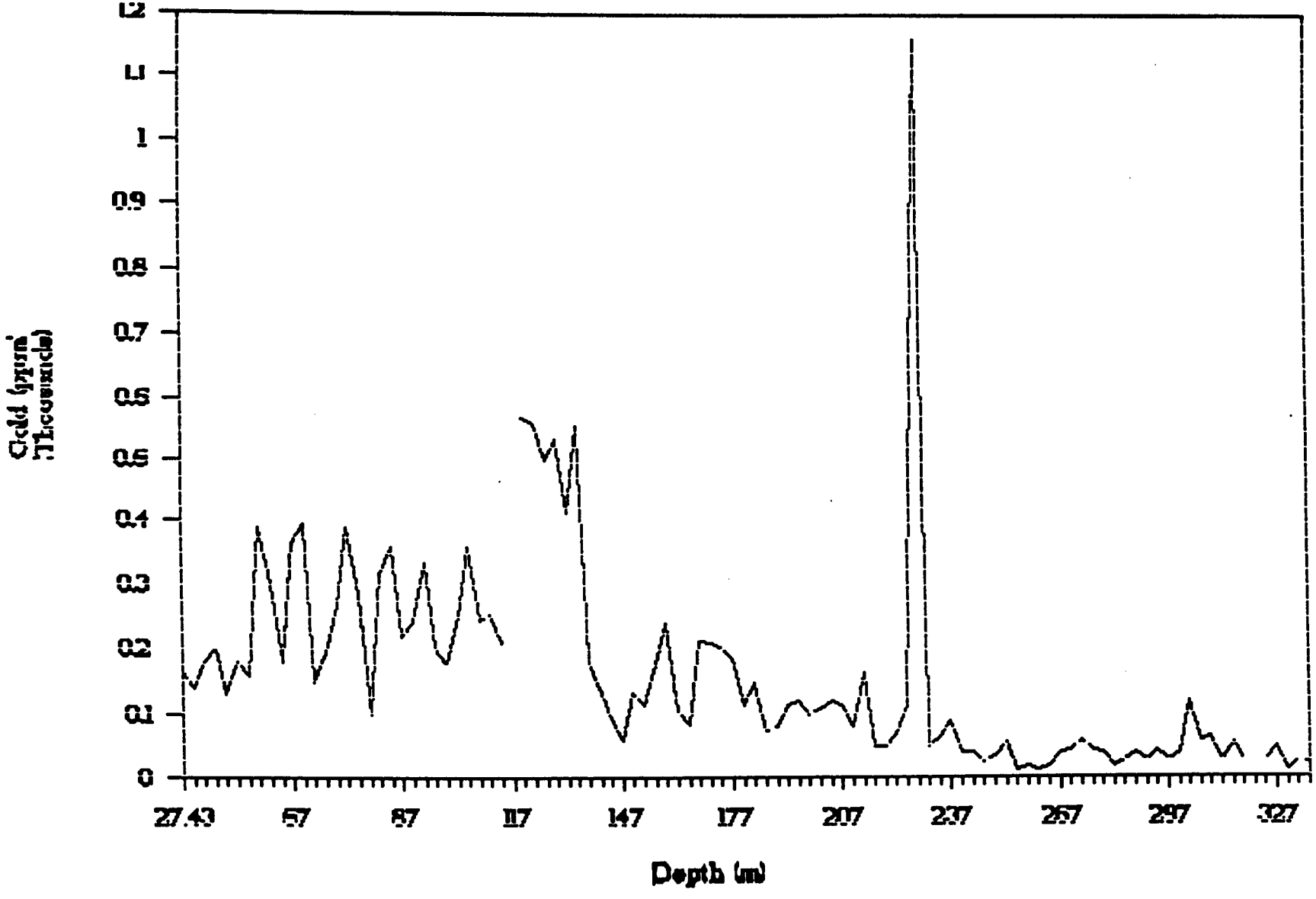
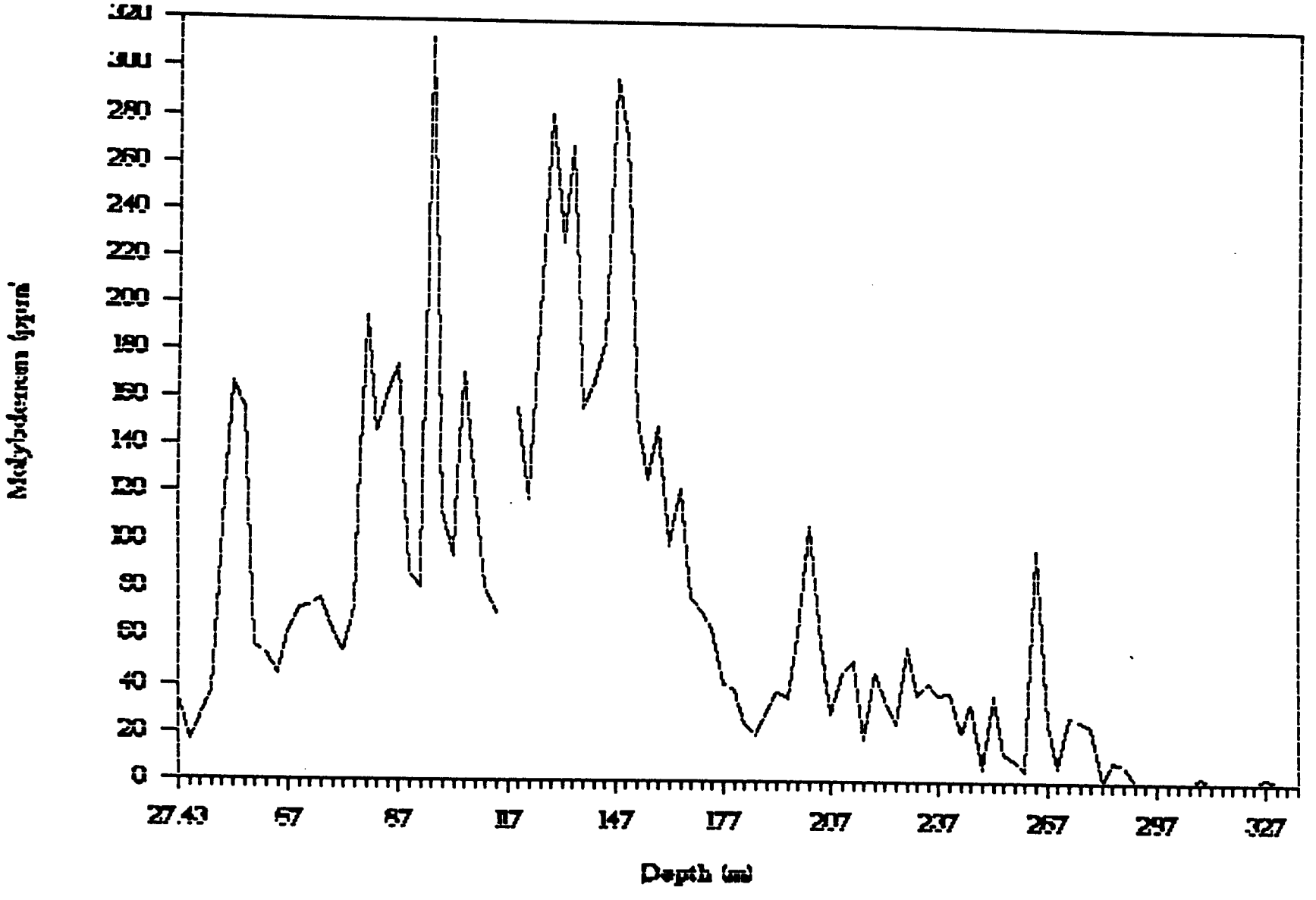
Molybdenum Assays for Hole EC 174



Copper Assays for Hole EC 175



Gold Assays for Hole EC 175



Molybdenum Assays for Hole EC 175