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ASSESSMENT REPORT
ON THE
MCINTOSH DIAMOND DRILLING PROGRAM
EXPO MINERAL CLAIMS

NORTHERN VANCOUVER ISLAND, BRITISH COLUMBIA

NTS: 92L/12

Latitude: 50° 40' N
Longitude: 127° 50' W

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JUN 30 1994

Geological Survey Branch
MEMPR

For

Moraga Resources Ltd.
1507 - 1030 West Georgia Street
Vancouver, B.C.
V6E 2Y3

By

David J. Pawliuk, B.Sc., P. Geo.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

April 30, 1994

23,407

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SUMMARY

Between February 22 and April 10, 1994 the author was employed by Kamaka Resources Ltd. to supervise drill exploration at MacIntosh Mountain on the Expo property.

The drill program consisting of 972.01 metres (3,189 feet) in four holes was completed within the Hushamu copper-gold deposit area. The drill program was successful in defining additional, but low grade, copper mineralization beneath siliceous pyrophyllite breccias which cap McIntosh Mountain. It also delineated a portion of the geological boundaries of the Hushamu copper-gold deposit to the southwest and east.

A total of \$176,013 was spent on this exploration program between February 1, 1994 and April 10, 1994; this amount is claimed for assessment purposes.

INTRODUCTION

Mr. Maurice Young, President of Moraga Resources Ltd., requested Kamaka Resources Ltd. coordinate and supervise an exploration program on the Expo property at the Hushamu-McIntosh Mountain copper-gold deposit area near Holberg, British Columbia.

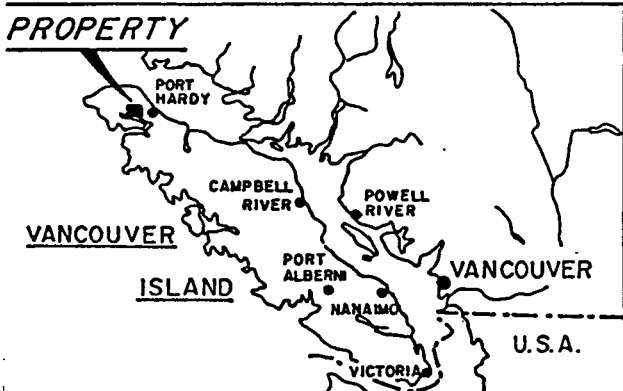
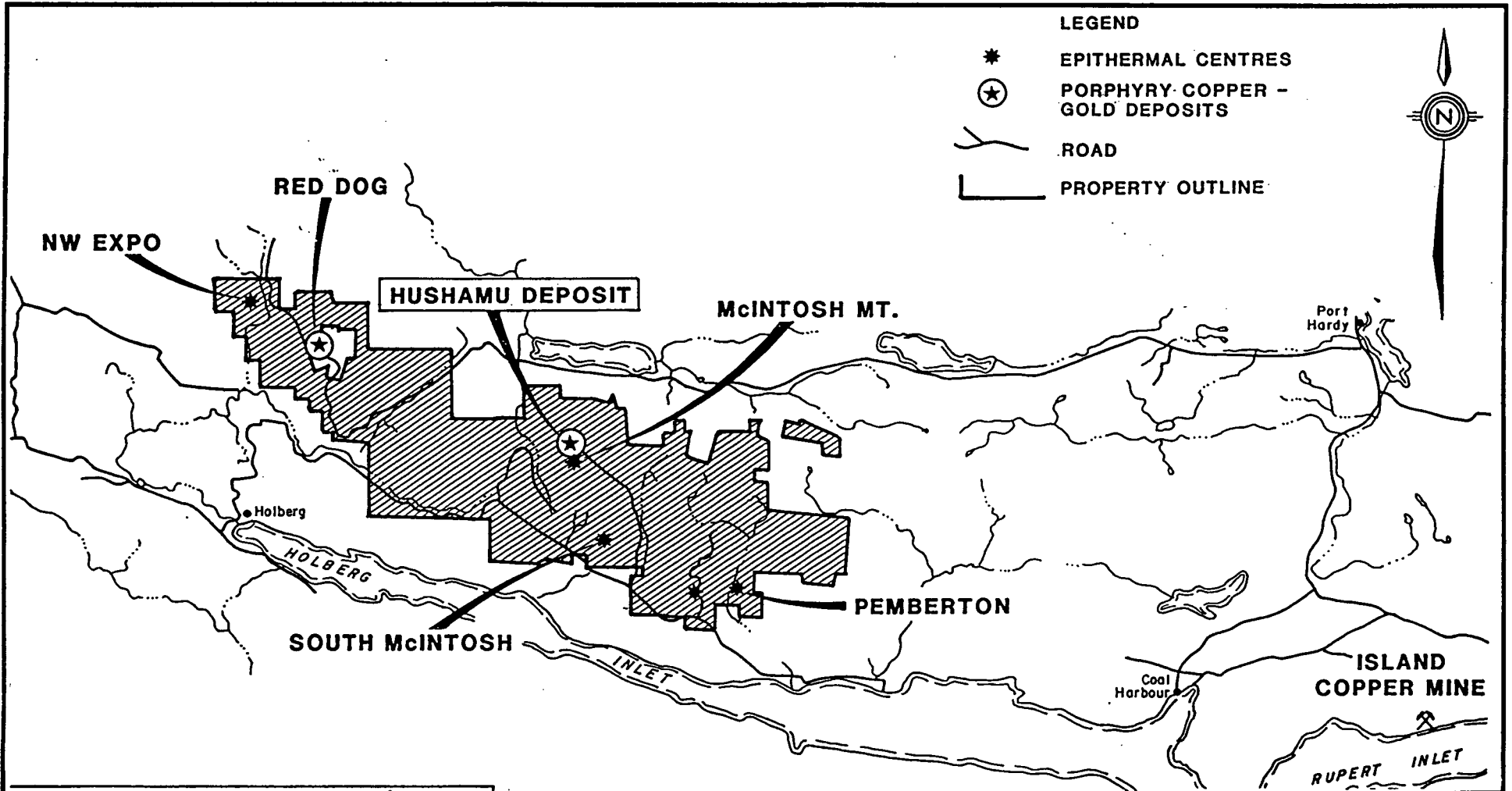
The program was designed to further investigate mineralized zones southwest and east of the main Hushamu copper-gold deposit.

Preliminary drill hole layout commenced in February, 1994; the drilling was carried out between March 3 and April 8, 1994.

LOCATION AND ACCESS

The Expo property is located on northern Vancouver Island approximately 360 km (225 miles) northwest of Vancouver, British Columbia (Figure 1). This large claim group covers a 20 km (13 mile) stretch of ground immediately north, and parallel to, the western end of Holberg Inlet on N.T.S. topographic map-sheet 92L/12.

The Hushamu-McIntosh copper-gold deposit is near the centre of the Expo property (Figure 2). Most areas of the Expo property can be reached by well-maintained logging roads and forest tracks. The main access to the claim block is via forest road "Wanokana Main" which commences on the outskirts of Coal Harbour.



MORAGA RESOURCES LTD.		
EXPO PROPERTY		
LOCATION AND PROPERTY MAP		
KAMAKA RESOURCES LTD.		
Scale: As Shown	Figure: 1	Date: APR. 1993

Daily airline service to Port Hardy from Vancouver is provided by Canadian Airlines International and other carriers. There is also good highway access, with travel from Vancouver taking eight or nine 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, northwesterly 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 feet). Within the claim block ridge tops are commonly about 300 metres (1,000 feet) above valley floors. The property is within N.T.S. topographic map-sheet 92L/12.

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 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 abundant in areas of high relief and on the higher ridges. However, thick humus on the forested slopes and scattered residual glacial gravels on the valley floors restrict geological mapping in these areas.

PROPERTY DESCRIPTION

The Expo property of Moraga Resources Ltd. and BHP-Utah Mines Ltd. consists of over 532 contiguous mineral claims, mostly two-post mineral claims designated "Expo" and "Hep".

This drilling report is being applied as assessment against a portion of the claims within the Expo property. Figure 3 shows the mineral claim groups. Complete lists of the grouped claims can be found in Appendix 1.

HISTORY

A large copper-molybdenum deposit discovered at the eastern end of Rupert Inlet during the 1960s was developed into the Island Copper mine by Utah Mines Ltd.(Figure 2). This mine commenced production in October 1971. Reserves on opening were 257 million tonnes at an average grade of 0.52% copper and 0.017% molybdenum.

Following the discovery of important copper mineralization on the Utah property, a great deal of

exploration was performed 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. held mineral claims covering most of the area extending from the eastern end of Rupert Inlet to the western 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 property).

After exploring the area extensively to 1975, Utah dropped some of the claims but retained the Expo property. Exploration on the Expo claims had located the Hushamu copper-gold deposit estimated in 1983 to contain 58,420,000 mineable tons grading 0.32% copper, 0.008% molybdenum and 413 ppb gold with a stripping ratio of 2.21:1. The indicated geological reserve for the deposit was over 100 million tons at the same grade, but at a higher stripping ratio².

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

The Hushamu deposit and these other alteration zones are the targets for Moraga Resources Ltd.'s current gold and copper exploration¹. The urgency for developing another copper deposit in the area is prompted by the expected closure of the Island Copper Mine in 1995 due to the depletion of the pit reserves.

Moraga Resources Ltd. has completed eight phases of exploration since obtaining an option on the Expo property.

The first groundwork was a downhole pulse electromagnetic survey of diamond drill hole EC-158 at Pemberton Hills⁷. This survey indicated a sheet-like sulphide horizon with a significantly more responsive sulphide zone to the north-northwest of the drill hole. This anomaly is awaiting further fieldwork.

The second program commenced in late November of 1988, on the completion of Moraga's public financing, and included regional mapping with road-cut sampling, computer modelling of the 1963 airborne geophysical data, and a 762 metre (2,500 foot) drill programme. In addition archived soil sample rejects were recovered from storage and analyzed for gold, arsenic, selenium, tellurium, bismuth and antimony. These samples were previously analyzed for copper, lead and zinc⁸.

The third work program was diamond drilling in the vicinity of the Red Dog deposit in April and

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May of 1990.

A fourth program of drilling was carried out from June to August 1990 in the vicinity of the Hushamu deposit; at the same time, another drill program was carried out on behalf of Moraga Resources Ltd. on the Red Dog deposit.

A fifth program of drilling was carried out during November and December 1990 in the vicinity of the Hushamu deposit.

A sixth program consisted of analyzing soil and drill core sample pulps, geochemical rock sampling and diamond drilling from February to August 1991⁹.

A seventh program consisted of diamond drilling from November 1991 to February 1992. Preliminary drill hole layout commenced in September 1991¹⁰.

This latest program consisted of diamond drilling during March and April 1994.

REGIONAL GEOLOGY

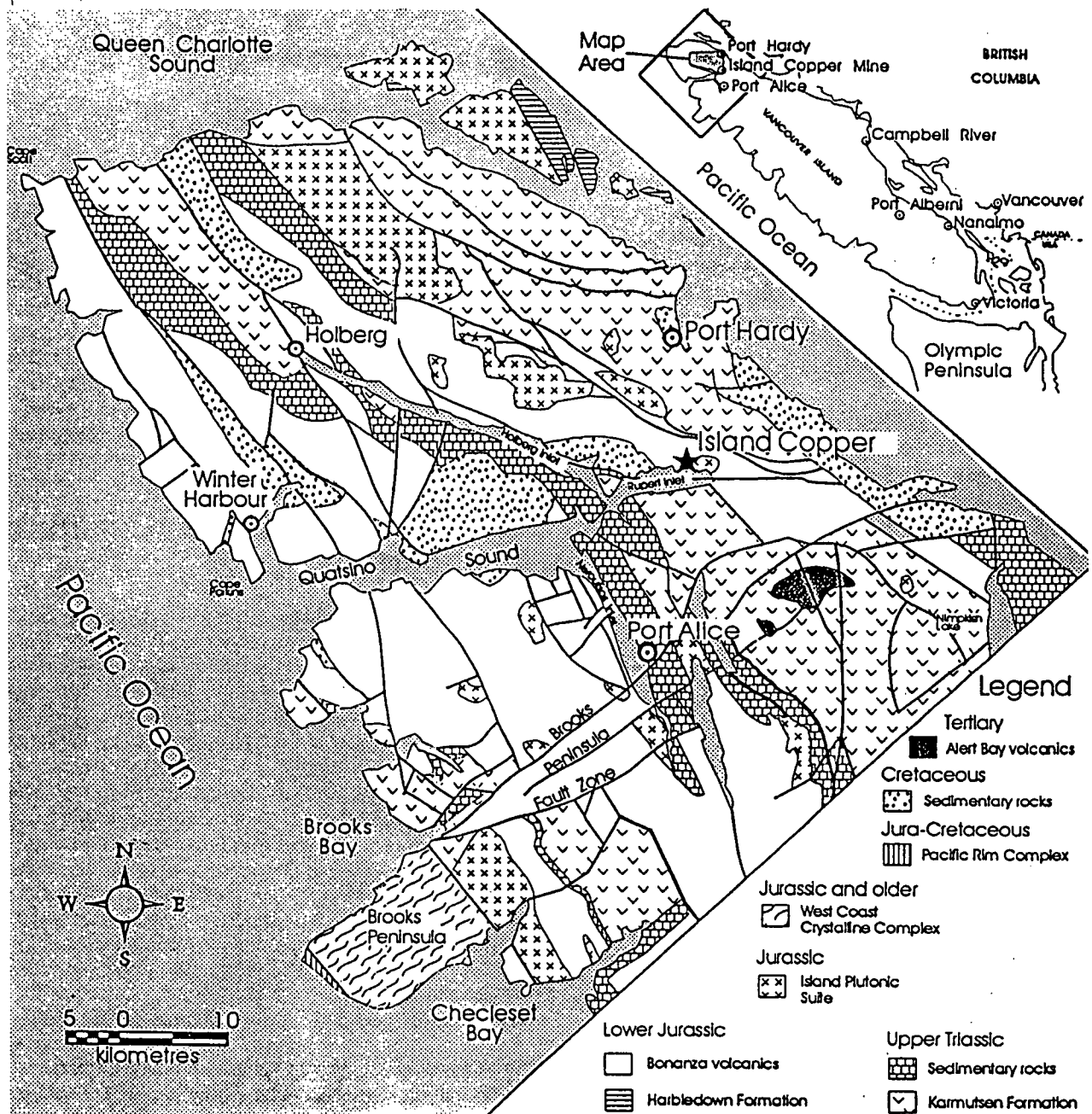
Vancouver Island north of Holberg and Rupert inlets is underlain by Upper Triassic to Lower Jurassic rocks of the Vancouver Group. The Vancouver Group rocks are intruded by rocks of Jurassic and Tertiary age, and disconformably overlain by Cretaceous sedimentary rocks. Figure 5 shows a 1:500,000 scale geological map 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 of up to 750 metres (2,500 feet).

Sedimentary and Volcanic Rocks

The Vancouver Group includes a basal sediment-sill unit of shales and siltstones invaded by diabase sills, Karmutsen Formation volcanic flows and pyroclastics, Quatsino Formation limestone, Parson Bay Formation argillite, Harbledown Formation argillite and greywacke and Bonanza Formation tuffs and breccias³.

The Vancouver Group is unconformably overlain by the non-marine Cretaceous Longarm Formation sediments which occupy local basins. Early coal mining in the district was from several of these basins.



Generalized geology of northern Vancouver Island (modified after Muller *et al.*, 1974).

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EXPO PROPERTY		
REGIONAL GEOLOGY		
KAMAKA RESOURCES LTD.		
Scale: As Shown	Figure: 2	Date: APR. 1993

Intrusive Rocks

The Vancouver Group rocks are intruded by Jurassic stocks and batholiths. A northwest-trending belt of stocks extends from the east end of Rupert Inlet to the mouth of Stranby River on the north coast of Vancouver Island⁶.

Dykes and irregular bodies of quartz-feldspar porphyry occur along the south edge of this belt of stocks. The porphyries 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 and mineralized Bonanza Formation wallrocks. The porphyries are also cut by quartz 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 Bay formations and represent feeders for Bonanza volcanism; and Tertiary basalt-dacite dykes intruding Cretaceous sediments.

Structure

The rocks north of Holberg and Rupert inlets are folded into shallow synclines along northwesterly fold axes. The steeper southwesterly limbs of these folds have apparently been truncated by faults roughly parallel to the fold axes.

Failure of limestone during folding may have influenced the location of some of the faults, as indicated by the proximity of the Dawson and Stranby River faults to Quatsino Formation limestone. Transverse faulting is pronounced and manifested by numerous north and northeasterly trending faults and topographic lineaments (Figure 4).

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

The beds generally dip gently to moderately to the southwest. West of Holberg dips are locally much steeper where measured 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 Formation. Bedding is generally inconspicuous in massive beds of Karmutsen, Quatsino and Bonanza formation rocks, particularly inland where outcrop exposure is limited.

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 mafic volcanic rocks (Karmutsen Formation): 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.

PROPERTY GEOLOGY

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

In the Hushamu deposit area the rocks are mainly Bonanza Formation andesitic to basaltic bedded and massive tuffs, formational breccias and rare amygdaloidal and porphyritic flows. Within the upper Bonanza Formation 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 porphyries of the Island Intrusions which have local propylitic and pyrophyllitic alteration halos as shown in Figure 5.

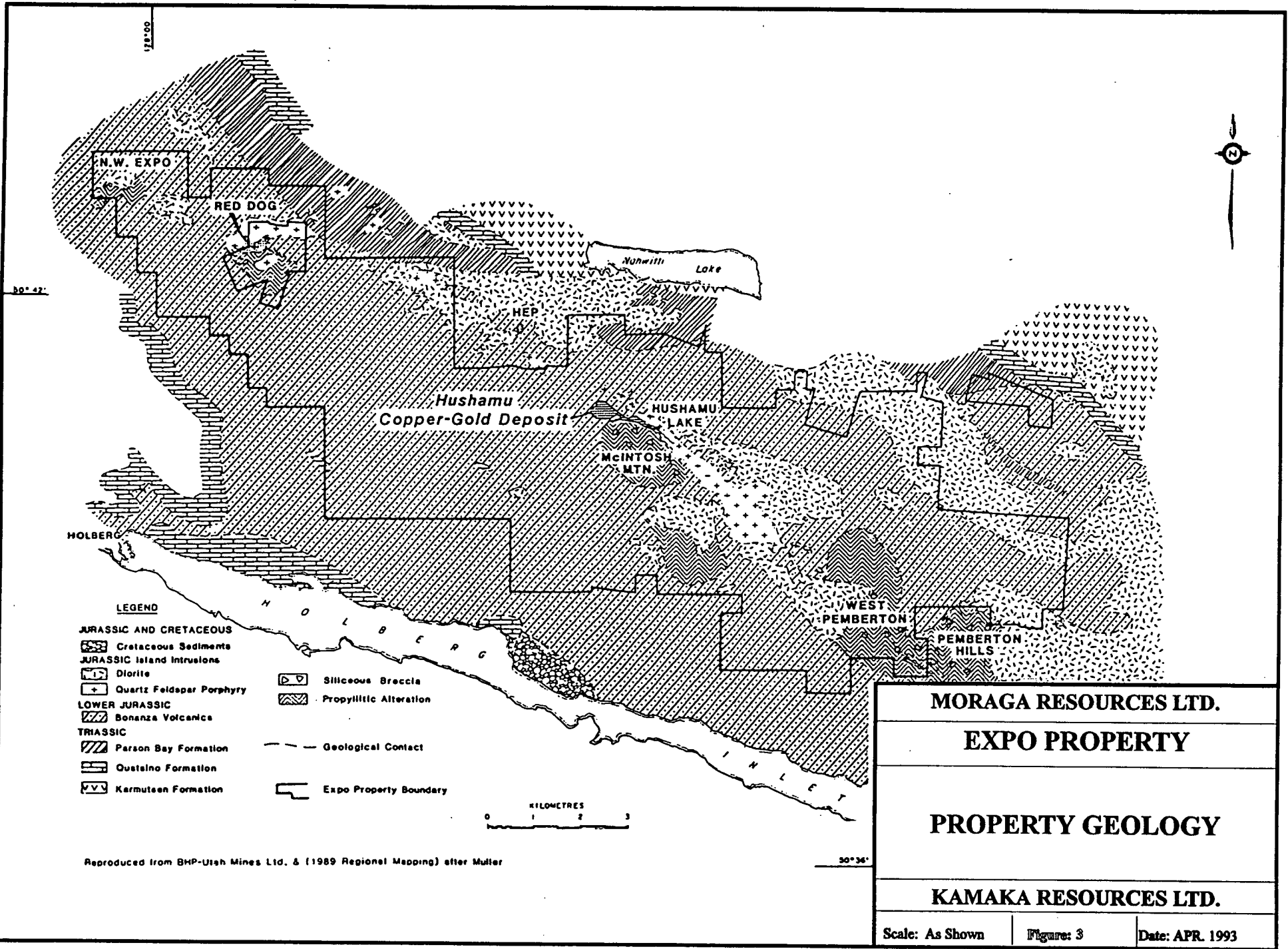
DRILL PROGRAM SUMMARY

The drill program was performed using a Longyear 38 diamond drill with NQ wireline equipment between March 3 and April 10, 1994. The drilling was carried out by Olympic Drilling & Consulting Ltd. of Delta, British Columbia. The program consisted of 972.01 metres (3,189 feet) of drilling in four holes at the Hushamu deposit area.

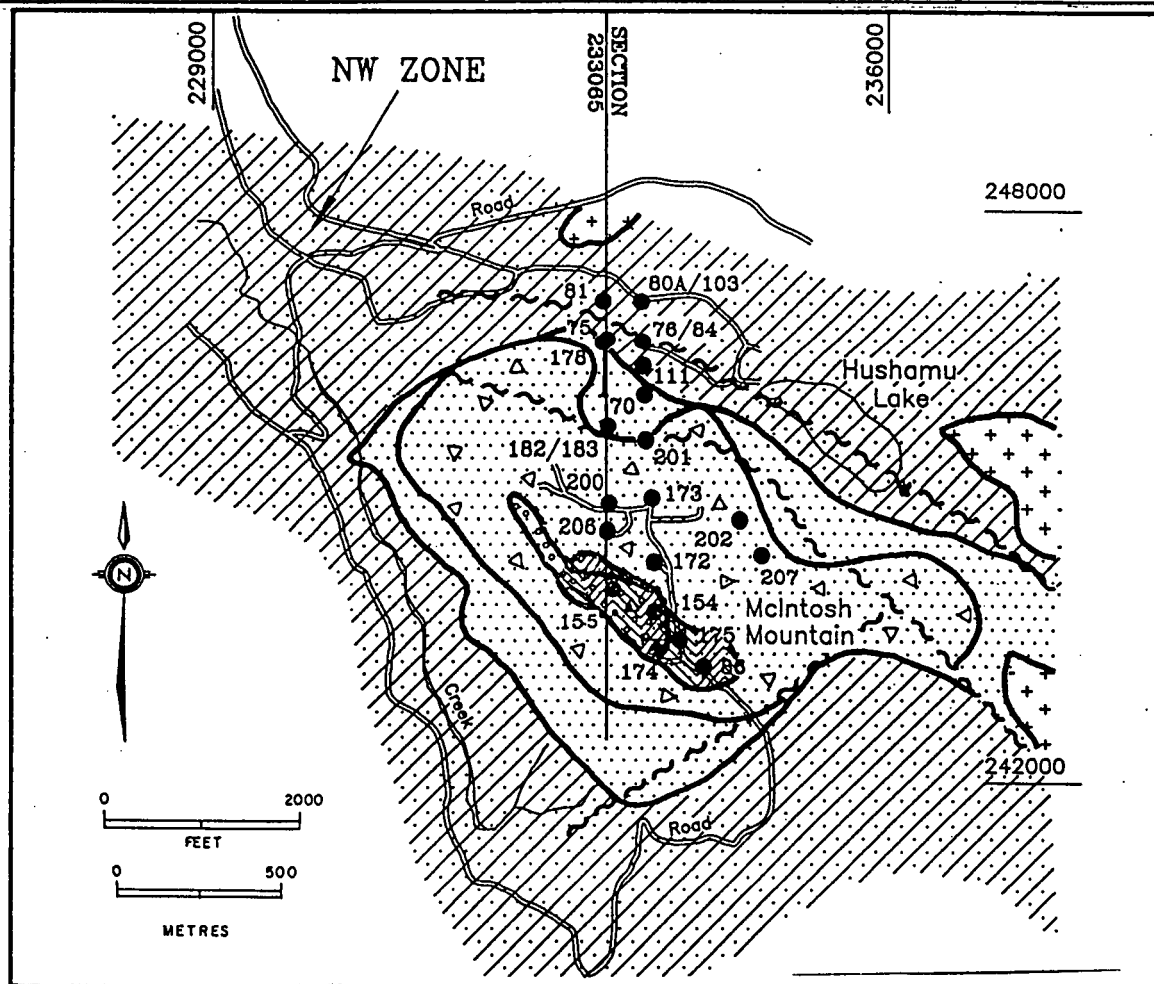
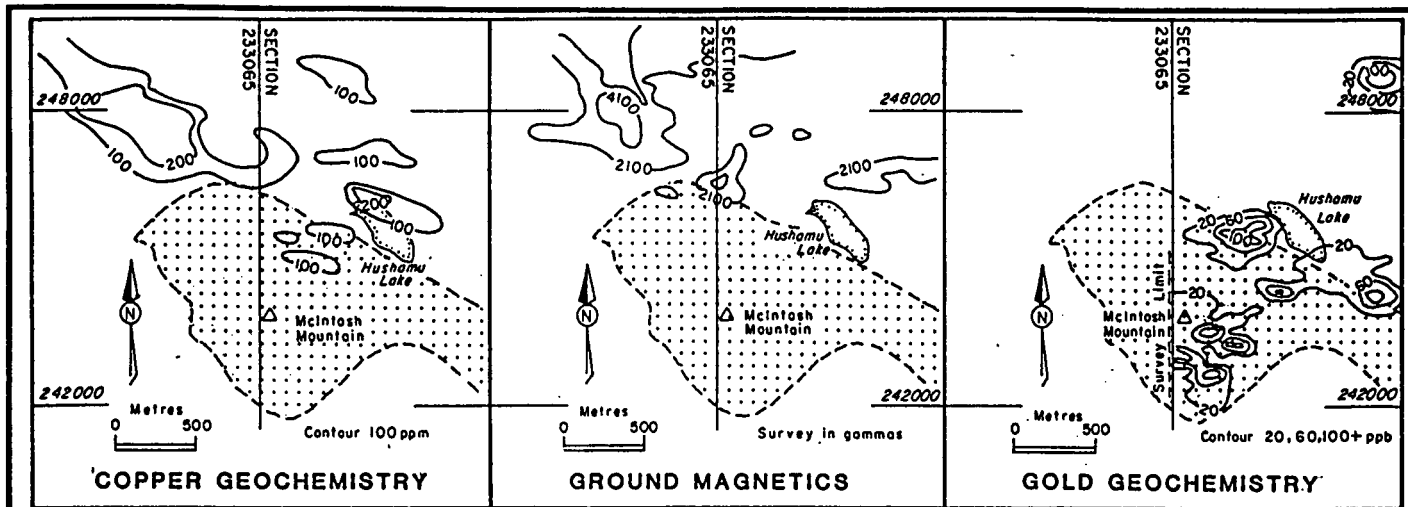
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




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PROPERTY GEOLOGY		
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Scale: As Shown	Figure: 3	Date: APR. 1993



-  **BONANZA VOLCANICS**
Mainly andesitic flows and pyroclastics—chlorite-illite altered
-  **INTRUSIVES**
Mainly dioritic to quartz-dioritic porphyries; minor QFP and syenitic bodies
-  **HYDROTHERMAL BRECCIA**
Multiphase porphyry-related complex including magnetic-hydrothermal and preatormagmatic bodies
- ALTERATION**
-  High-sulphidation epithermal overprint—silicification including vuggy silica
-  High-sulphur assemblage
-  Quartz-sericite-diaspore+pyrophyllite

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EXPO PROPERTY

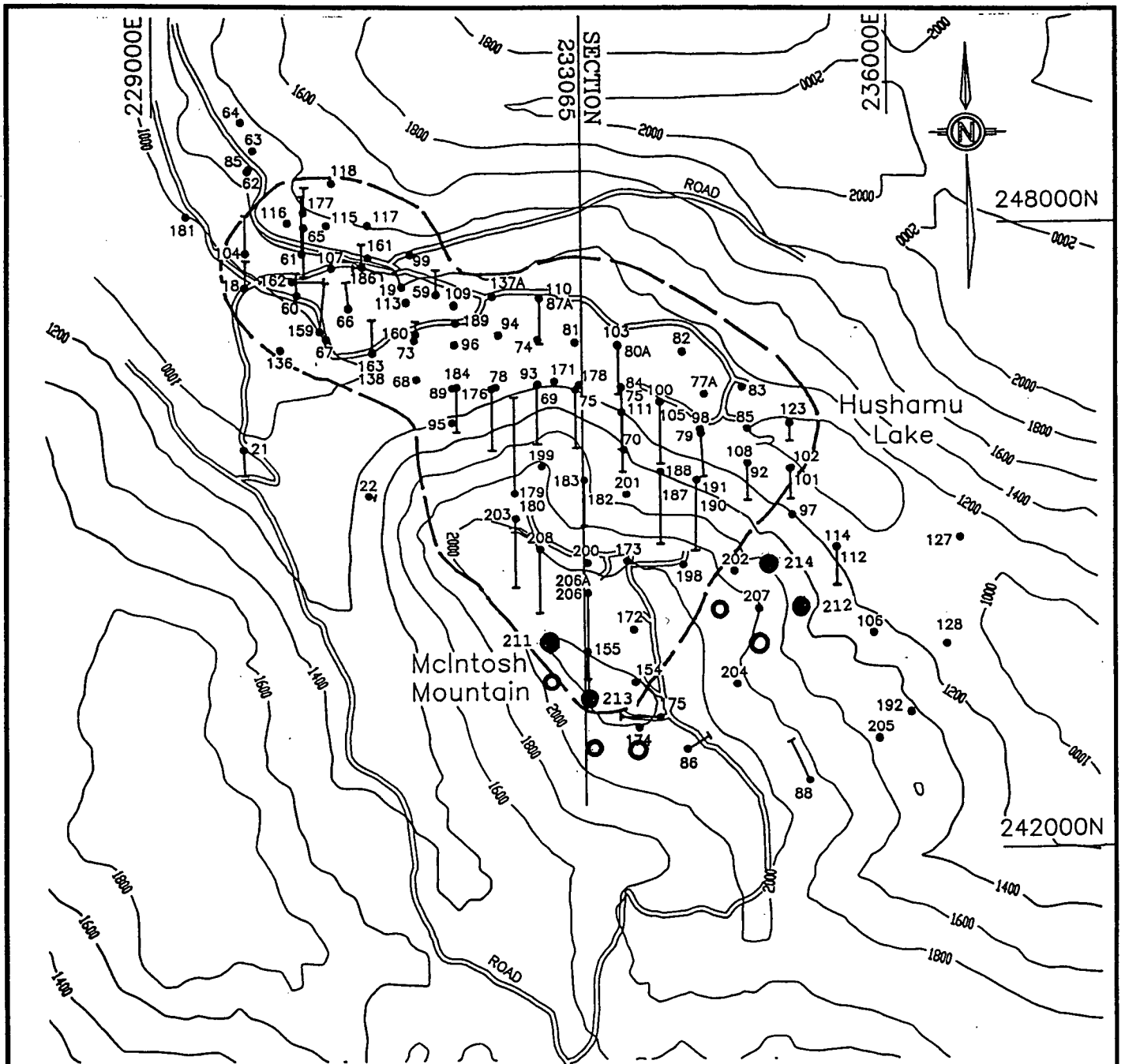
**HUSHAMU-McINTOSH
GEOLOGY**

KAMAKA RESOURCES LTD.

Scale: As Shown

Figure: 4

Date: APR. 1993



LEGEND

- Drillhole
- March 1994 drillhole
- Proposed drillhole
- Optimum pit outline

0 1000 2000

FEET

0 500

METRES

MORAGA RESOURCES LTD.

EXPO PROPERTY

**HUSHAMU-McINTOSH
DRILL SITES**

KAMAKA RESOURCES LTD.

Scale: As Shown

Figure: 5

Date: APR. 1993

The drilling information is summarized in Table 1. Drill hole locations are shown on Figure 6. The drill core analytical certificates form Appendix 2; drill hole logs form Appendix 3. The core is stored on the BHP Minerals Canada Ltd. Island Copper minesite at Rupert Inlet.

The split core samples were shipped by bus to Chemex Labs Ltd. at North Vancouver, B.C. The samples were ground to minus 80 mesh then 0.500 gm was digested in 3 ml of 3-1-2 HCL-HN03-H2O at 95°C for one hour. This solution is then diluted to 10 ml with water and analyzed by ICP methods for nine elements. Gold analysis was by fire assay and atomic absorption using a 10 gm sample.

Table 1 Hushamu Drill Program Summary

<u>Hole #</u>	<u>Dip</u>	<u>Azimuth</u>	<u>Depth</u>	<u>Reason for Drilling</u>	<u>Location</u>
EC-211	-90°	---	271.58m(891 ft)	To test depth of silica cap and mineralized zone to west of EC-206.	232787E/ 243970N
EC-212	-90°	---	204.83m(672 ft)	To test mineralized zone to east of EC-207.	235143E/ 244336N
EC-213	-90°	---	129.84m(426 ft)	To test depth of silica cap and mineralized zone to south of EC-206.	233117E/ 243528N
EC-214	-90°	---	365.76m(1200 ft)	To test mineralized zone and mineralized zone to east of EC-202.	234775E/ 244830N

	TOTAL		972.01m(3,189 ft)		

The drill data may be subject to further detailed petrological and mineralogical studies. These studies will be reported in later assessment filings.

CONCLUSIONS

The drilling has better defined the mineralization at the southwestern and eastern boundaries of the Hushamu copper/gold deposit.

Gold and copper appear to be directly related at Hushamu; rocks with high copper concentrations also contain high gold concentrations. Gold and copper are within pyrite and pyrite/chalcopyrite associated with quartz and quartz/carbonate veins, as well as generally disseminated in various rock types¹⁰. Gold and copper concentrations also appear to be elevated in moderately to intensely silicified rocks. Chalcopyrite and bornite are the most abundant copper minerals within the Hushamu deposit.

The Hushamu copper/gold deposit is hosted by a suite of Bonanza Formation volcanic rocks, but there does not appear to be a specific lithologic host for either gold or copper mineralization. The mineralization is epigenetic and areas of brecciation, silicification and subsequent quartz veining are prime exploration targets.

The significant copper mineralization within the siliceous breccia previously found in drill hole EC-206 was not intersected in drill hole EC-211 to the west. EC 211 contained low grade copper mineralization across the projected zone. The southwestern boundary of the Hushamu deposit in this area lies between these two holes. Hole EC-213, to the south of EC-206, did not intersect significant copper mineralization within the upper siliceous breccia. For logistical reasons, EC-213 was stopped at 426 feet (target depth 900 feet). It therefor failed to test the altered volcanics underlying the siliceous breccia. There was a significant increase in copper and gold mineralization in the bottom of the hole, indicating a mineralized zone at depth.

The copper mineralization previously drilled in hole EC-207 was not intersected in drill hole EC-212 to the east. This hole was abandoned at 672 feet due to bad drilling conditions. Copper mineralization is increasing with depth. The hole intersected pyrophyllite-altered volcanics and quartz feldspar porphyry, but only minor copper mineralization. No diorite was intersected in this hole. It appears the boundary of the Hushamu deposit in this area lies between holes EC207 and EC212

Drill hole EC-214 intersected a wide interval of low-grade copper mineralization northeast of EC-202. A quartz-feldspar porphyry dyke within the hole appears to be the south extension of the main Hushamu dyke. The mineralization previously drilled in EC 202 and EC 207 may reflect a halo developed around the nose of the QFP dyke. Hole EC 214 showed increased copper mineralization on the "footwall" of the dyke, similar to other holes in the area. The hole terminated in an extensive

zone of QFP, with occasional basalt dykes. This QFP is weakly mineralized.

The copper and gold mineralization within the volcanic rocks south and east of the main mineralized zone at Hushamu show extensive hydrothermal alteration. Drillholes in the western portion of this zone show anomalous to ore grade copper and gold mineralization. There is generally an extensive barren alteration zone above the copper mineralization (perhaps 100-250 metres), however this zone may contain higher grade gold mineralization in late quartz stockworks (eg 1gm plus adjacent to EC 154).

The magnetometer and IP surveys over the alteration zone show extensive sulphide (pyrite) mineralization, and near linear zones of weakly anomalous magnetics. The orientation of these anomalies, and the general topographic expression, indicate that there may be several "enechelon" mineralized zones under the alteration "cap". The size of the alteration cap (approx 3km by 1.5 km), and the width of probable mineralized zones (100-300m, assuming mineralization surrounding QFP dykes as at Hushamu), make the full testing of the target areas an extensive project.

The following recommendations target two areas of the alteration zone adjacent to where ore grade mineralization has already been intersected. This is considered a minimum exploration requirement for the area.

RECOMMENDATIONS

The large alteration zone, with anomalous amounts of copper and gold in soil, south of the ridge of McIntosh Mountain warrants additional drill exploration.

Further exploration should be conducted on McIntosh Mountain south and east of drill holes EC-154 and EC-213, towards hole EC 86 (and if successful, further to the south. In this area anomalous gold occurs in soil and the Bonanza Formation rocks exposed on surface have been altered by the introduction of chlorite, silica, epidote and clay minerals. This area may host near-surface copper and gold mineralization.

Additional exploration is warranted to define the southern and western extensions to the mineralization in EC 202 and 207. It is possible that this mineralization exists in a lens surrounding the nose of the main QFP dyke. It may extend to near EC 204 in the south, and midway to EC 172 in the west. It is best tested with a vertical hole from the site prepared 400 feet west of EC 207.

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CERTIFICATE OF EXPENDITURES

The following costs relate to diamond drilling at the Hushamu area between February 1, 1994 and April 10, 1994.

Personnel

1 Project Geologist - D. Pawliuk - 41 days @ \$340/day	\$ 13,940.00
1 Senior Geologist - P. Dasler - 7.75 days @ \$380/day	2,945.00
1 Field Technician - S. Oakley - 19 days @ \$250/day	4,750.00
1 Field Technician - D. Cosgrove - 19 days @ \$250/day	4,750.00
1 Field Technician - P. Small - 3 days @ \$250/day	750.00

Disbursements

Drill Mob	3000.00
Drilling - 3,189 feet @ \$28.18/foot inclusive	89,875.69
Food and Accommodation - man days @ \$38.65	3,169.88
Field Supplies	1,363.55
Equipment Rental	360.00
Vehicle/Supplies etc - 1 4x4 - 40 days @ \$91.76 all-inclusive	3668.22
Helicopter	16,946.88
Drafting/Maps/Office/Tel/Report	4,398.82
Assays - drill cores/freight - 306 by 9 element ICP + Au @ \$22.77	6,969.24
Heavy Equipment Rental (Hiab, excavator)	4,198.25
Disbursement Fee	1,641.50
SUB TOTAL	162,723.03
GST	13,290.07
TOTAL	<u>\$ 176,013.1</u>

David J. Pawliuk, B.Sc., P.Geo.
April 30, 1994

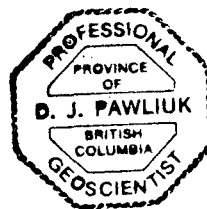
CERTIFICATE OF QUALIFICATIONS

I, David J. Pawliuk, do hereby certify that:

1. I am a contract geologist for Kamaka Resources Ltd. with offices at 6074 - 45A Avenue, Delta, British Columbia.
2. I am a graduate of the University of Alberta, Edmonton, Alberta with a degree of B.Sc., Geology.
3. I am a member, in good standing, of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I am member, in good standing, of the Association of Professional Engineers and Geoscientists of British Columbia.
5. I have practised my profession continuously since 1975.
6. This report is based upon my personal fieldwork including supervision of the diamond drilling program, geological logging of the drill core, and upon reports of others working in the area.
7. I have no interest, either direct or indirect, nor do I expect to receive any such interest, in the properties or securities of Moraga Resources Ltd. or Jordex Resources Inc.
8. This report has been prepared for British Columbia Ministry of Energy, Mines and Petroleum Resources assessment purposes only.

David J. Pawliuk

David J. Pawliuk, B.Sc., P.Ge.
April 30, 1994



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APPENDIX 1

CLAIM DATA - MAC GROUPS

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APPENDIX 2

GEOCHEMICAL ANALYSIS CERTIFICATES

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APPENDIX 3

DRILL LOGS

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April 30, 1994 UPDATED EXPO CLAIM LIST

LOC#	Claim Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
1	Clesk 1	20	3792	230976	17/04/02	92L/12W
2	Clesk 2	20	3793	230977	16/04/02	92L/12W
3	Clesk 3	1	3794	230978	17/04/02	92L/12W
4	Clesk 4	1	3795	230979	15/04/02	92L/12W
5	Don 1 Fr	1	29501	232298	18/08/02	92L/12W
6	Don 2 Fr	1	29502	232299	18/08/02	92L/12W
7	Don 3 Fr	1	29633	232303	12/09/02	92L/12W
8	Don 4 Fr	1	29503	232300	18/08/02	92L/12W
9	Don 5 Fr	1	29504	232301	18/08/02	92L/12W
10	Don 6 Fr	1	29505	232302	18/08/02	92L/12W
11	Don 7 Fr	1	29634	232304	12/09/02	92L/12W
12	Don 8 Fr	1	29635	232305	12/09/02	92L/12W
13	Don 9 Fr	1	30281	232306	21/11/02	92L/12W
14	Don 10 Fr	1	30282	232307	21/11/02	92L/12W
15	Don 11 Fr	1	30283	232308	21/11/02	92L/12W
16	Don 12 Fr	1	30284	232309	21/11/02	92L/12W
17	Don 13 Fr	1	30285	232310	21/11/02	92L/12W
18	Don 14 Fr	1	30286	232311	21/11/02	92L/12W
19	Don 15 Fr	1	30287	232312	21/11/02	92L/12W
20	Don 16 Fr	1	30288	232313	21/11/02	92L/12W
21	Expro 1	1	19722	231711	18/09/02	92L/12W
22	Expro 2	1	19723	231712	18/09/02	92L/12W
23	Expro 3	1	19724	231713	18/09/02	92L/12W
24	Expro 4	1	19725	231714	18/09/02	92L/12W
25	Expro 5	1	19726	231715	18/09/02	92L/12W
26	Expro 6	1	3602	230787	16/10/02	92L/12W
27	Expro 7	1	19728	231716	18/09/02	92L/12W
28	Expro 8	1	19729	231717	18/09/02	92L/12W
29	Expro 9	1	19730	231718	18/09/02	92L/12W
30	Expro 10 Fr	1	19731	231719	18/09/02	92L/12W
31	Expro 11	1	19732	231720	18/09/02	92L/12W
32	Expro 12	1	19733	231721	18/09/02	92L/12W
33	Expro 13	1	19734	231722	18/09/02	92L/12W
34	Expro 14	1	19735	231723	18/09/02	92L/12W
35	Expro 15	1	19736	231724	18/09/02	92L/12W
36	Expro 16	1	19737	231725	18/09/02	92L/12W
37	Expro 18	1	19739	231726	18/09/02	92L/12W
38	Expro 21	1	19740	231727	18/09/02	92L/12W
39	Expro 22	1	19741	231728	18/09/02	92L/12W
40	Expro 23	1	19742	231729	18/09/02	92L/12W
41	Expro 24	1	19743	231730	18/09/02	92L/12W
42	Expro 25	1	19744	231731	18/09/02	92L/12W
43	Expro 26	1	19745	231732	18/09/02	92L/12W
44	Expro 27	1	19746	231733	18/09/02	92L/12W
45	Expro 28	1	19747	231734	18/09/02	92L/12W
46	Expro 29	1	19748	231735	18/09/02	92L/12W
47	Expro 30	1	19749	231736	18/09/02	92L/12W
48	Expro 31	1	19750	231737	18/09/02	92L/12W

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CC#	Claim Name	Units	Record No.	Tenure No	Expiry_D	NTS
49	Expo 32	1	19751	231738	18/09/02	92L/12W
50	Expo 33	1	19752	231739	18/09/02	92L/12W
51	Expo 34	1	19753	231740	18/09/02	92L/12W
52	Expo 35	1	19754	231741	18/09/02	102I/9E
53	Expo 36	1	19755	231742	18/09/02	102I/9E
54	Expo 37	1	19756	231743	18/09/02	102I/9E
55	Expo 38	1	19757	231744	18/09/02	102I/9E
56	Expo 41	1	19758	231745	18/09/02	92L/12W
57	Expo 42	1	19759	231746	18/09/02	92L/12W
58	Expo 44	1	19760	231747	18/09/02	92L/12W
59	Expo 45	1	19761	231748	18/09/02	92L/12W
60	Expo 46	1	19762	231749	18/09/02	92L/12W
61	Expo 47	1	19763	231750	18/09/02	92L/12W
62	Expo 48	1	19764	231751	18/09/02	92L/12W
63	Expo 49	1	19765	231752	18/09/02	92L/12W
64	Expo 50	1	19766	231753	18/09/02	92L/12W
65	Expo 51	1	19767	231754	18/09/02	92L/12W
66	Expo 52	1	19768	231755	18/09/02	92L/12W
67	Expo 53	1	19769	231756	18/09/02	92L/12W
68	Expo 54	1	19770	231757	18/09/02	92L/12W
69	Expo 55	1	19771	231758	18/09/02	92L/12W
70	Expo 60	1	19776	231759	18/09/02	92L/12W
71	Expo 61	1	19777	231760	18/09/02	92L/12W
72	Expo 62	1	19778	231761	18/09/02	92L/12W
73	Expo 63	1	19779	231762	18/09/02	92L/12W
74	Expo 71	1	19785	231763	18/09/02	92L/12W
75	Expo 72	1	19786	231764	18/09/02	92L/12W
76	Expo 73	1	19787	231765	18/09/02	92L/12W
77	Expo 74	1	19788	231766	18/09/02	92L/12W
78	Expo 75	1	19789	231767	18/09/02	92L/12W
79	Expo 76	1	19790	231768	18/09/02	102I/9E
80	Expo 77	1	19791	231769	18/09/02	102I/9E
81	Expo 78	1	19792	231770	18/09/02	92L/12W
82	Expo 81	1	19793	231771	18/09/02	92L/12W
83	Expo 82	1	19794	231772	18/09/02	92L/12W
84	Expo 83	1	19795	231773	18/09/02	92L/12W
85	Expo 84	1	19796	231774	18/09/02	92L/12W
86	Expo 85	1	19797	231775	18/09/02	92L/12W
87	Expo 86	1	19798	231776	18/09/02	92L/12W
88	Expo 87	1	19799	231777	18/09/02	92L/12W
89	Expo 88	1	19800	231778	18/09/02	92L/12W
90	Expo 93	1	19801	231779	18/09/02	92L/12W
91	Expo 94	1	19802	231780	18/09/02	92L/12W
92	Expo 95	1	19803	231781	18/09/02	92L/12W
93	Expo 96	1	19804	231782	18/09/02	92L/12W
94	Expo 97	1	19805	231783	18/09/02	92L/12W
95	Expo 98	1	19806	231784	18/09/02	92L/12W
96	Expo 101	1	20473	231972	19/10/02	92L/12W

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File #	Claim Name	Units	Record No.	Tenure No	Expiry_D	NTS
97	Expo 102	1	20474	231973	19/10/02	92L/12W
98	Expo 103	1	20475	231974	19/10/02	92L/12W
99	Expo 104	1	20476	231975	19/10/02	92L/12W
100	Expo 105	1	20477	231976	19/10/02	92L/12W
101	Expo 106	1	20478	231977	19/10/02	92L/12W
102	Expo 107	1	20479	231978	19/10/02	92L/12W
103	Expo 108	1	20480	231979	19/10/01	92L/12W
104	Expo 109	1	20232	231867	10/10/02	92L/12W
105	Expo 110	1	20233	231868	10/10/02	92L/12W
106	Expo 111	1	20234	231869	10/10/02	92L/12W
107	Expo 112	1	20235	231870	10/10/02	92L/12W
108	Expo 113	1	20236	231871	10/10/02	92L/12W
109	Expo 114	1	20237	231872	10/10/02	92L/12W
110	Expo 115	1	20238	231873	10/10/02	92L/12W
111	Expo 116	1	20239	231874	10/10/02	92L/12W
112	Expo 117	1	20240	231875	10/10/02	92L/12W
113	Expo 118	1	20241	231876	10/10/02	92L/12W
114	Expo 119	1	3547	230732	08/07/02	92L/12W
115	Expo 120	1	20243	231877	10/10/02	92L/12W
116	Expo 121	1	20244	231878	10/10/02	92L/12W
117	Expo 122	1	20245	231879	10/10/02	92L/12W
118	Expo 123	1	20246	231880	10/10/02	92L/12W
119	Expo 124	1	20247	231881	10/10/02	92L/12W
120	Expo 125	1	20248	231882	10/10/02	92L/12W
121	Expo 126	1	20249	231883	10/10/02	92L/12W
122	Expo 127	1	20250	231884	10/10/02	92L/12W
123	Expo 128	1	20251	231885	10/10/02	92L/12W
124	Expo 129	1	20252	231886	10/10/02	92L/12W
125	Expo 130	1	20253	231887	10/10/02	92L/12W
126	Expo 131	1	3546	230731	08/07/02	92L/12W
127	Expo 132	1	3545	230730	08/07/02	92L/12W
128	Expo 133	1	20256	231888	10/10/02	92L/12W
129	Expo 134	1	20257	231889	10/10/02	92L/12W
130	Expo 135	1	20258	231890	10/10/02	92L/12W
131	Expo 136	1	20259	231891	10/10/02	92L/12W
132	Expo 137	1	20260	231892	10/10/02	92L/12W
133	Expo 138	1	20261	231893	10/10/02	92L/12W
134	Expo 139	1	20262	231894	10/10/02	92L/12W
135	Expo 140	1	20263	231895	10/10/02	92L/12W
136	Expo 141	1	20264	231896	10/10/02	92L/12W
137	Expo 142	1	20265	231897	10/10/02	92L/12W
138	Expo 143	1	20266	231898	10/10/02	92L/12W
139	Expo 144	1	20267	231899	10/10/02	92L/12W
140	Expo 145	1	20268	231900	10/10/02	92L/12W
141	Expo 146	1	20269	231901	10/10/02	92L/12W
142	Expo 147	1	20270	231902	10/10/02	92L/12W
143	Expo 148	1	20271	231903	10/10/02	92L/12W
144	Expo 149	1	20272	231904	10/10/02	92L/12W

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REC#	Claim_Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
145	Expo 150	1	20273	231905	10/10/02	92L/12W
146	Expo 151	1	20274	231906	10/10/02	92L/12W
147	Expo 152	1	20275	231907	10/10/02	92L/12W
148	Expo 153	1	20276	231908	10/10/02	92L/12W
149	Expo 154	1	20277	231909	10/10/02	92L/12W
150	Expo 155	1	20278	231910	10/10/02	92L/12W
151	Expo 156	1	20279	231911	10/10/02	92L/12W
152	Expo 157	1	20280	231912	10/10/02	92L/12W
153	Expo 158	1	20281	231913	10/10/02	92L/12W
154	Expo 159	1	20282	231914	10/10/02	92L/12W
155	Expo 160	1	20283	231915	10/10/02	92L/12W
156	Expo 161	1	20284	231916	10/10/02	92L/12W
157	Expo 162	1	20285	231917	10/10/02	92L/12W
158	Expo 163	1	20286	231918	10/10/02	92L/12W
159	Expo 164	1	20287	231919	10/10/02	92L/12W
160	Expo 177	1	20288	231920	10/10/02	92L/12W
161	Expo 178	1	20289	231921	10/10/02	92L/12W
162	Expo 179	1	20290	231922	10/10/02	92L/12W
163	Expo 180	1	20291	231923	10/10/02	92L/12W
164	Expo 181	1	20292	231924	10/10/02	92L/12W
165	Expo 182	1	20293	231925	10/10/02	92L/12W
166	Expo 183	1	20294	231926	10/10/02	92L/12W
167	Expo 184	1	20295	231927	10/10/02	92L/12W
168	Expo 185	1	20296	231928	10/10/02	92L/12W
169	Expo 186	1	20297	231929	10/10/02	92L/12W
170	Expo 187	1	20298	231930	10/10/02	92L/12W
171	Expo 188	1	20299	231931	10/10/02	92L/12W
172	Expo 189	1	20300	231932	10/10/02	92L/12W
173	Expo 190	1	20301	231933	10/10/02	92L/12W
174	Expo 191	1	20302	231934	10/10/02	92L/12W
175	Expo 192	1	20303	231935	10/10/02	92L/12W
176	Expo 193	1	20304	231936	10/10/02	92L/12W
177	Expo 194	1	20305	231937	10/10/02	92L/12W
178	Expo 195	1	20306	231938	10/10/02	92L/12W
179	Expo 196	1	20307	231939	10/10/02	92L/12W
180	Expo 197	1	20308	231940	10/10/02	92L/12W
181	Expo 198	1	20309	231941	10/10/02	92L/12W
182	Expo 199	1	20310	231942	10/10/02	92L/12W
183	Expo 200	1	20311	231943	10/10/02	92L/12W
184	Expo 201	1	20312	231944	10/10/02	92L/12W
185	Expo 202	1	20313	231945	10/10/02	92L/12W
186	Expo 203	1	20314	231946	10/10/02	92L/12W
187	Expo 204	1	20315	231947	10/10/02	92L/12W
188	Expo 205	1	20316	231948	10/10/02	92L/12W
189	Expo 206	1	20317	231949	10/10/02	92L/12W
190	Expo 207	1	20318	231950	10/10/02	92L/12W
191	Expo 208	1	20319	231951	10/10/02	92L/12W
192	Expo 209	1	20320	231952	10/10/02	92L/12W

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Rec#	Claim_Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
193	Expo 210	1	20321	231953	10/10/02	92L/12W
194	Expo 211	1	20322	231954	10/10/02	92L/12W
195	Expo 212	1	20323	231955	10/10/02	92L/12W
196	Expo 213	1	20324	231956	10/10/02	92L/12W
197	Expo 214	1	20325	231957	10/10/02	92L/12W
198	Expo 215	1	20326	231958	10/10/02	92L/12W
199	Expo 216	1	20327	231959	10/10/02	92L/12W
200	Expo 217	1	20328	231960	10/10/02	92L/12W
201	Expo 218	1	20329	231961	10/10/02	92L/12W
202	Expo 219	1	20330	231962	10/10/02	92L/12W
203	Expo 220	1	20331	231963	10/10/02	92L/12W
204	Expo 221	1	20332	231964	10/10/02	92L/12W
205	Expo 222	1	20333	231965	10/10/02	92L/12W
206	Expo 223	1	20334	231966	10/10/02	92L/12W
207	Expo 224	1	20335	231967	10/10/02	92L/12W
208	Expo 225	1	20336	231968	10/10/02	92L/12W
209	Expo 226	1	20337	231969	10/10/02	92L/12W
210	Expo 227	1	20481	231980	19/10/02	92L/12W
211	Expo 228	1	20482	231981	19/10/02	92L/12W
212	Expo 229	1	20483	231982	19/10/02	92L/12W
213	Expo 230	1	20484	231983	19/10/02	92L/12W
214	Expo 231	1	20485	231984	19/10/02	92L/12W
215	Expo 232	1	20486	231985	19/10/02	92L/12W
216	Expo 233	1	20487	231986	19/10/02	92L/12W
217	Expo 234	1	20488	231987	19/10/02	92L/12W
218	Expo 235	1	20489	231988	19/10/02	92L/12W
219	Expo 236	1	20490	231989	19/10/02	92L/12W
220	Expo 237	1	20491	231990	19/10/02	92L/12W
221	Expo 238	1	20492	231991	19/10/02	92L/12W
222	Expo 239	1	20493	231992	19/10/02	92L/12W
223	Expo 240	1	20494	231993	19/10/02	92L/12W
224	Expo 241	1	20495	231994	19/10/02	92L/12W
225	Expo 242	1	20496	231995	19/10/02	92L/12W
226	Expo 243	1	20497	231996	19/10/02	92L/12W
227	Expo 244	1	20498	231997	19/10/02	92L/12W
228	Expo 245	1	20499	231998	19/10/02	92L/12W
229	Expo 246	1	20500	231999	19/10/02	92L/12W
230	Expo 247	1	20501	232000	19/10/02	92L/12W
231	Expo 248	1	20502	232001	19/10/02	92L/12W
232	Expo 249	1	20503	232002	19/10/02	92L/12W
233	Expo 250	1	20504	232003	19/10/02	92L/12W
234	Expo 251	1	20505	232004	19/10/02	92L/12W
235	Expo 252	1	20506	232005	19/10/02	92L/12W
236	Expo 253	1	20507	232006	19/10/02	92L/12W
237	Expo 254	1	20508	232007	19/10/02	92L/12W
238	Expo 255	1	20509	232008	19/10/02	92L/12W
239	Expo 256	1	20510	232009	19/10/02	92L/12W
240	Expo 257	1	20511	232010	19/10/02	92L/12W

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Claim #	Claim Name	Units	Record No.	Tenure No	Expiry_D	NTS
241	Expo 258	1	20512	232011	19/10/02	92L/12W
242	Expo 259	1	20513	232012	19/10/02	92L/12W
243	Expo 260	1	20514	232013	19/10/02	92L/12W
244	Expo 261	1	20515	232014	19/10/02	92L/12W
245	Expo 262	1	20516	232015	19/10/02	92L/12W
246	Expo 263	1	20517	232016	19/10/02	92L/12W
247	Expo 264	1	20518	232017	19/10/02	92L/12W
248	Expo 265	1	20519	232018	19/10/02	92L/12W
249	Expo 266	1	20520	232019	19/10/02	92L/12W
250	Expo 267	1	20521	232020	19/10/02	92L/12W
251	Expo 268	1	20522	232021	19/10/02	92L/12W
252	Expo 269	1	20523	232022	19/10/02	92L/12W
253	Expo 270	1	20524	232023	19/10/02	92L/12W
254	Expo 271	1	20525	232024	19/10/02	92L/12W
255	Expo 272	1	20526	232025	19/10/02	92L/12W
256	Expo 273	1	20527	232026	19/10/02	92L/12W
257	Expo 274	1	20528	232027	19/10/02	92L/12W
258	Expo 275	1	20529	232028	19/10/02	92L/12W
259	Expo 277	1	20531	232029	19/10/02	92L/12W
260	Expo 278	1	20532	232030	19/10/02	92L/12W
261	Expo 279	1	20533	232031	19/10/02	92L/12W
262	Expo 280	1	20534	232032	19/10/02	92L/12W
263	Expo 281	1	20535	232033	19/10/02	92L/12W
264	Expo 282	1	20536	232034	19/10/02	92L/12W
265	Expo 283	1	20537	232035	19/10/02	92L/12W
266	Expo 284	1	20538	232036	19/10/02	92L/12W
267	Expo 285	1	20539	232037	19/10/02	92L/12W
268	Expo 286	1	20540	232038	19/10/02	92L/12W
269	Expo 287	1	20541	232039	19/10/02	92L/12W
270	Expo 288	1	20542	232040	19/10/02	92L/12W
271	Expo 289	1	20543	232041	19/10/02	92L/12W
272	Expo 290	1	20544	232042	19/10/02	92L/12W
273	Expo 291	1	20545	232043	19/10/02	92L/12W
274	Expo 292	1	20546	232044	19/10/02	92L/12W
275	Expo 293	1	20547	232045	19/10/02	92L/12W
276	Expo 294	1	20548	232046	19/10/02	92L/12W
277	Expo 295	1	20549	232047	19/10/02	92L/12W
278	Expo 296	1	20871	232100	19/10/02	92L/12W
279	Expo 297	1	20550	232048	19/10/02	92L/12W
280	Expo 298	1	20551	232049	19/10/02	92L/12W
281	Expo 299	1	20552	232050	19/10/02	92L/12W
282	Expo 300	1	20553	232051	19/10/02	92L/12W
283	Expo 301	1	20554	232052	19/10/02	92L/12W
284	Expo 302	1	20555	232053	19/10/02	92L/12W
285	Expo 303	1	20556	232054	19/10/02	92L/12W
286	Expo 304	1	20557	232055	19/10/02	92L/12W
287	Expo 305	1	20558	232056	19/10/02	92L/12W
288	Expo 306	1	20559	232057	19/10/02	92L/12W

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REC#	Claim_Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
289	Expo 307	1	21113	232102	13/11/02	92L/12W
290	Expo 309	1	21115	232103	13/11/02	92L/12W
291	Expo 310	1	21116	232104	13/11/02	92L/12W
292	Expo 312	1	21118	232105	13/11/02	92L/12W
293	Expo 313	1	21119	232106	13/11/02	92L/12W
294	Expo 314	1	21120	232107	13/11/02	92L/12W
295	Expo 315	1	21121	232108	13/11/02	92L/12W
296	Expo 317	1	20338	231970	10/10/02	92L/12W
297	Expo 318	1	20339	231971	10/10/02	92L/12W
298	Expo 319	1	21574	232213	18/12/02	92L/12W
299	Expo 320	1	21575	232214	18/12/02	92L/12W
300	Expo 321	1	21576	232215	18/12/02	92L/12W
301	Expo 322	1	21577	232216	18/12/02	92L/12W
302	Expo 323	1	21578	232217	18/12/02	92L/12W
303	Expo 324	1	21579	232218	18/12/02	92L/12W
304	Expo 325	1	21580	232219	18/12/02	92L/12W
305	Expo 326	1	21581	232220	18/12/02	92L/12W
306	Expo 327	1	20560	232058	19/10/02	92L/12W
307	Expo 328	1	20561	232059	19/10/02	92L/12W
308	Expo 329	1	20562	232060	19/10/02	92L/12W
309	Expo 330	1	20563	232061	19/10/02	92L/12W
310	Expo 331	1	20564	232062	19/10/02	92L/12W
311	Expo 332	1	20565	232063	19/10/02	92L/12W
312	Expo 333	1	20566	232064	19/10/02	92L/12W
313	Expo 334	1	20567	232065	19/10/02	92L/12W
314	Expo 335	1	20568	232066	19/10/02	92L/12W
315	Expo 336	1	20569	232067	19/10/02	92L/12W
316	Expo 344	1	21136	232109	14/11/02	92L/12W
317	Expo 345	1	21137	232110	14/11/02	92L/12W
318	Expo 346	1	21138	232111	14/11/02	92L/12W
319	Expo 347	1	20570	232068	19/10/02	92L/12W
320	Expo 348	1	20571	232069	19/10/02	92L/12W
321	Expo 349	1	20572	232070	19/10/02	92L/12W
322	Expo 350	1	20573	232071	19/10/02	92L/12W
323	Expo 351	1	20574	232072	19/10/02	92L/12W
324	Expo 352	1	20575	232073	19/10/02	92L/12W
325	Expo 353	1	20576	232074	19/10/02	92L/12W
326	Expo 354	1	20577	232075	19/10/02	92L/12W
327	Expo 355	1	20578	232076	19/10/02	92L/12W
328	Expo 356	1	20579	232077	19/10/02	92L/12W
329	Expo 367	1	20580	232078	19/10/02	92L/12W
330	Expo 368	1	20581	232079	19/10/02	92L/12W
331	Expo 369	1	20582	232080	19/10/02	92L/12W
332	Expo 370	1	20583	232081	19/10/02	92L/12W
333	Expo 371	1	20584	232082	19/10/02	92L/12W
334	Expo 372	1	20585	232083	19/10/02	92L/12W
335	Expo 373	1	20586	232084	19/10/02	92L/12W
336	Expo 374	1	20587	232085	19/10/02	92L/12W

April 30, 1994 UPDATED EXPO CLAIM LIST

Rec#	Claim Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
337	Expo 375	1	20588	232086	19/10/02	92L/12W
338	Expo 376	1	20589	232087	19/10/02	92L/12W
339	Expo 377	1	21149	232112	14/11/02	92L/12W
340	Expo 378	1	21150	232113	14/11/02	92L/12W
341	Expo 387	1	20590	232088	19/10/02	92L/12W
342	Expo 388	1	20591	232089	19/10/02	92L/12W
343	Expo 389	1	20592	232090	19/10/02	92L/12W
344	Expo 390	1	20593	232091	19/10/02	92L/12W
345	Expo 392	1	20595	232092	19/10/02	92L/12W
346	Expo 393	1	20596	232093	19/10/02	92L/12W
347	Expo 394	1	20597	232094	19/10/02	92L/12W
348	Expo 395	1	20598	232095	19/10/02	92L/12W
349	Expo 396	1	20599	232096	19/10/02	92L/12W
350	Expo 397	1	21159	232114	14/11/02	92L/12W
351	Expo 398	1	21160	232115	14/11/02	92L/12W
352	Expo 399	1	21161	232116	14/11/02	92L/12W
353	Expo 400	1	21162	232117	14/11/02	92L/12W
354	Expo 417	1	21169	232118	14/11/02	92L/12W
355	Expo 418	1	21170	232119	14/11/02	92L/12W
356	Expo 419	1	3601	230786	17/10/02	92L/12W
357	Expo 420	1	3600	230785	17/10/02	92L/12W
358	Expo 421	1	21173	232120	14/11/02	92L/12W
359	Expo 422	1	21174	232121	14/11/02	92L/12W
360	Expo 437	1	21179	232122	14/11/02	92L/12E
361	Expo 438	1	21180	232123	14/11/02	92L/12E
362	Expo 439	1	21181	232124	14/11/02	92L/12E
363	Expo 440	1	3599	230784	17/10/02	92L/12E
364	Expo 441	1	21183	232125	14/11/02	92L/12E
365	Expo 442	1	21184	232126	14/11/02	92L/12E
366	Expo 443	1	21185	232127	14/11/02	92L/12E
367	Expo 444	1	21186	232128	14/11/02	92L/12E
368	Expo 445	1	21187	232129	14/11/02	92L/12E
369	Expo 446	1	21188	232130	14/11/02	92L/12E
370	Expo 457	1	21189	232131	14/11/02	92L/12E
371	Expo 458	1	21190	232132	14/11/02	92L/12E
372	Expo 459	1	21191	232133	14/11/02	92L/12E
373	Expo 460	1	21192	232134	14/11/02	92L/12E
374	Expo 461	1	21193	232135	14/11/02	92L/12E
375	Expo 462	1	21194	232136	14/11/02	92L/12E
376	Expo 463	1	21195	232137	14/11/02	92L/12E
377	Expo 464	1	21196	232138	14/11/02	92L/12E
378	Expo 465	1	21197	232139	14/11/02	92L/12E
379	Expo 466	1	21198	232140	14/11/02	92L/12E
380	Expo 487	1	21598	232221	18/12/93	92L/12W
381	Expo 495	1	21606	232222	18/12/02	92L/12W
382	Expo 496	1	21607	232223	18/12/02	92L/12W
383	Expo 497	1	21608	232224	18/12/02	92L/12W
384	Expo 498	1	21609	232225	18/12/02	92L/12W

April 30, 1994 UPDATED EXPO CLAIM LIST

REC#	Claim_Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
385	Expo 499	1	21610	232226	18/12/02	92L/12W
386	Expo 500	1	21611	232227	18/12/02	92L/12W
387	Expo 501 Fr	1	20610	232097	19/10/02	92L/12W
388	Expo 502 Fr	1	20611	232098	19/10/02	92L/12W
389	Expo 503 Fr	1	20612	232099	17/10/02	92L/12W
390	Expo 504 Fr	1	21612	232228	18/12/02	92L/12W
391	Expo 521	1	21613	232229	18/12/02	92L/12W
392	Expo 522	1	21614	232230	18/12/02	92L/12W
393	Expo 523	1	21615	232231	18/12/02	92L/12W
394	Expo 524	1	21616	232232	18/12/02	92L/12W
395	Expo 525	1	21617	232233	18/12/02	92L/12W
396	Expo 526	1	21618	232234	18/12/02	92L/12W
397	Expo 527	1	21619	232235	18/12/02	92L/12W
398	Expo 528	1	21620	232236	18/12/02	92L/12W
399	Expo 529	1	21621	232237	18/12/02	92L/12W
400	Expo 530	1	21622	232238	18/12/02	92L/12W
401	Expo 533	1	21625	232239	18/12/02	92L/12W
402	Expo 534	1	21626	232240	18/12/02	92L/12W
403	Expo 537	1	21629	232241	18/12/02	92L/12W
404	Expo 538	1	21630	232242	18/12/02	92L/12W
405	Expo 541	1	21633	232243	18/12/02	92L/12W
406	Expo 542	1	21634	232244	18/12/02	92L/12W
407	Expo 548	1	21200	232141	14/11/02	92L/12W
408	Expo 549	1	21201	232142	14/11/02	92L/12W
409	Expo 550	1	21202	232143	14/11/02	92L/12W
410	Expo 551	1	21203	232144	14/11/02	92L/12W
411	Expo 552	1	21204	232145	14/11/02	92L/12W
412	Expo 557	1	21209	232146	14/11/02	92L/12W
413	Expo 558	1	21210	232147	14/11/02	92L/12W
414	Expo 559	1	21211	232148	14/11/02	92L/12W
415	Expo 560	1	21212	232149	14/11/02	92L/12W
416	Expo 565	1	21217	232150	14/11/02	92L/12W
417	Expo 566	1	21218	232151	14/11/02	92L/12W
418	Expo 571	1	21219	232152	14/11/02	92L/12W
419	Expo 572	1	21220	232153	14/11/02	92L/12W
420	Expo 573	1	21221	232154	14/11/02	92L/12W
421	Expo 574	1	21222	232155	14/11/02	92L/12W
422	Expo 575	1	21223	232156	14/11/02	92L/12W
423	Expo 576	1	21224	232157	14/11/02	92L/12W
424	Expo 577	1	21225	232158	14/11/02	92L/12W
425	Expo 578	1	21226	232159	14/11/02	92L/12W
426	Expo 579	1	21227	232160	14/11/02	92L/12W
427	Expo 580	1	21228	232161	14/11/02	92L/12W
428	Expo 581	1	21229	232162	14/11/02	92L/12W
429	Expo 582	1	21230	232163	14/11/02	92L/12W
430	Expo 583	1	21231	232164	14/11/02	92L/12W
431	Expo 584	1	21232	232165	14/11/02	92L/12W
432	Expo 585	1	21233	232166	14/11/02	92L/12W

April 30, 1994 UPDATED EXPO CLAIM LIST

REC#	Claim_Name	Units	Record_No.	Tenure_No	Expiry_D	NTS
433	Expo 586	1	21234	232167	14/11/02	92L/12W
434	Expo 615	1	21235	232168	14/11/02	92L/12W
435	Expo 616	1	21236	232169	14/11/02	92L/12W
436	Expo 834	1	21286	232170	14/11/02	92L/12W
437	Expo 835	1	21287	232171	14/11/02	92L/12W
438	Expo 836	1	21288	232172	14/11/02	92L/12W
439	Expo 837	1	21289	232173	14/11/02	92L/12W
440	Expo 838	1	21290	232174	14/11/02	92L/12W
441	Expo 850	1	21309	232182	14/11/02	92L/12W
442	Expo 851	1	21310	232183	14/11/02	92L/12W
443	Expo 852	1	21311	232184	14/11/02	92L/12W
444	Expo 855	1	21314	232185	14/11/02	92L/12W
445	Expo 856	1	21315	232186	14/11/02	92L/12W
446	Expo 857	1	21316	232187	14/11/02	92L/12W
447	Expo 860	1	21319	232188	14/11/02	92L/12W
448	Expo 861	1	21320	232189	14/11/02	92L/12W
449	Expo 862	1	21321	232190	14/11/02	92L/12W
450	Expo 863	1	21322	232191	14/11/02	92L/12W
451	Expo 864	1	21323	232192	14/11/02	92L/12W
452	Expo 865	1	21324	232193	14/11/02	92L/12W
453	Expo 866	1	21325	232194	14/11/02	92L/12W
454	Expo 867	1	21326	232195	14/11/02	92L/12W
455	Expo 868	1	21327	232196	14/11/02	92L/12W
456	Expo 882	1	21295	232175	14/11/02	92L/12W
457	Expo 883	1	21296	232176	14/11/02	92L/12W
458	Expo 884	1	21297	232177	14/11/02	92L/12W
459	Expo 885	1	21298	232178	14/11/02	92L/12W
460	Expo 890	1	21303	232179	14/11/02	92L/12W
461	Expo 891	1	21304	232180	14/11/02	92L/12W
462	Expo 896	1	21305	232181	14/11/02	92L/12E
463	Expo 900	8	1200	229714	26/05/02	92L/12W
464	Expo 901	1	3540	230725	06/07/02	92L/12W
465	Expo 902	1	3541	230726	06/07/02	92L/12W
466	Expo 903	1	3542	230727	06/07/02	92L/12W
467	Expo 1008 Fr	1	27352	232275	05/12/02	92L/12W
468	Expo 1011 Fr	1	27355	232276	05/12/02	92L/12W
469	Expo 1012 Fr	1	27356	232277	05/12/02	92L/12W
470	Expo 1013 Fr	1	1557	229789	05/12/02	92L/12W
471	Expo 1014 Fr	1	1558	229790	22/08/02	92L/12W
472	Expo 1015 Fr	1	1559	229791	22/08/02	92L/12W
473	Hep 34	1	19012	231649	20/09/02	92L/12W
474	Hep 35	1	19013	231650	20/09/02	92L/12W
475	Hep 36	1	19014	231651	20/09/02	92L/12W
476	Hep 37	1	19015	231652	20/09/02	92L/12W
477	Hep 38	1	19016	231653	20/09/02	92L/12W
478	Hep 39	1	19017	231654	20/09/02	92L/12W
479	Hep 40	1	19018	231655	20/09/02	92L/12W
480	Hep 41	1	19019	231656	20/09/02	92L/12W

April 30, 1994 UPDATED EXPO CLAIM LIST

Row #	Claim Name	Units	Record No.	Tenure No	Expiry_D	NTS
481	Hep 42	1	19020	231657	20/09/02	92L/12W
482	Hep 43	1	19021	231658	20/09/02	92L/12W
483	Hep 44	1	19022	231659	20/09/02	92L/12W
484	Hep 45	1	19023	231660	20/09/02	92L/12W
485	Hep 46	1	19024	231661	20/09/02	92L/12W
486	Hep 47	1	19025	231662	20/09/02	92L/12W
487	Hep 48	1	19026	231663	20/09/02	92L/12W
488	Hep 49	1	19027	231664	20/09/02	92L/12W
489	Hep 50	1	19028	231665	20/09/02	92L/12W
490	Hep 51	1	19029	231666	20/09/02	92L/12W
491	Hep 52	1	3543	230728	20/09/02	92L/12W
492	Hep 53	1	3544	230729	07/07/02	92L/12W
493	Hep 54	1	19032	231667	07/07/02	92L/12W
494	Hep 55	1	19033	231668	20/09/02	92L/12W
495	Hep 56	1	19034	231669	20/09/02	92L/12W
496	Hep 57	1	19035	231370	20/09/02	92L/12W
497	Hep 58	1	19036	231671	20/09/02	92L/12W
498	Hep 59	1	19037	231672	20/09/02	92L/12W
499	Hep 60	1	3267	230453	28/02/02	92L/12W
500	Hep 61	1	3268	230454	01/03/02	92L/12W
501	Hep 62	1	19040	231673	20/09/02	92L/12W
502	Hep 63	1	19041	231674	20/09/02	92L/12W
503	Hep 64	1	19042	231675	20/09/02	92L/12W
504	Hep 65	1	19043	231676	20/09/02	92L/12W
505	Hep 66	1	19044	231677	20/09/02	92L/12W
506	Hep 67	1	19045	231678	20/09/02	92L/12W
507	Hep 68	1	19046	231679	20/09/02	92L/12W
508	Hep 69	1	3264	230450	28/02/02	92L/12W
509	Hep 70	1	3265	230451	01/03/01	92L/12W
510	Hep 71	1	3266	230452	01/03/01	92L/12W
511	Hep 86	1	20216	231851	04/10/02	92L/12W
512	Hep 87	1	20217	231852	04/10/02	92L/12W
513	Hep 88	1	20218	231853	04/10/02	92L/12W
514	Hep 89	1	20219	231854	04/10/02	92L/12W
515	Hep 90	1	20220	231855	04/10/02	92L/12W
516	Hep 91	1	20221	231856	04/10/02	92L/12W
517	Hep 92	1	20222	231857	04/10/02	92L/12W
518	Hep 93	1	20223	231858	04/10/02	92L/12W
519	Hep 94	1	20224	231859	04/10/02	92L/12W
520	Hep 95	1	20225	231860	04/10/02	92L/12W
521	Hep 96	1	20226	231861	04/10/02	92L/12W
522	Hep 97	1	20227	231862	04/10/02	92L/12W
523	Hep 98	1	20228	231863	04/10/02	92L/12W
524	Hep 99	1	20229	231864	04/10/02	92L/12W
525	Hep 100	1	20230	231865	04/10/02	92L/12W
526	Hep 101	1	20231	231866	04/10/02	92L/12W
527	Moe 1 Fr	1	37593	232471	11/06/02	92L/12W
528	Moe 2 Fr	1	37594	232472	11/06/02	92L/12W

April 30, 1994 UPDATED EXPO CLAIM LIST

Claim #	Claim Name	Units	Record No.	Tenure No	Expiry_D	NTS
529	Pemberton 1	10	1108	229685	01/04/02	92L/12W
530	Pemberton 2	20	1109	229686	01/04/02	92L/12W
531	Pemberton 3	15	1110	229687	01/04/02	92L/12W
532	Pemberton 5 Fr	1	1112	229688	01/04/02	92L/12W
533	Pemberton 6 Fr	1	1142	229692	14/04/01	92L/12E
534	T 1 Fr	1	35890	232383	05/10/02	92L/12W
535	T 2 Fr	1	35891	232384	05/10/02	92L/12W
536	T 3 Fr	1	35892	232385	05/10/02	92L/12W
537	T 4 Fr	1	35893	232386	05/10/02	92L/12W
538	H1	1		300428	01/06/02	92L/12W
539	H2	1		300429	01/06/02	92L/12W
540	H3	1		300430	01/06/02	92L/12W
541	H4	1		300431	01/06/02	92L/12W
542	New Expo 138	1		306629	23/11/93	92L/12W
543	Ex 1	1		318197	16/6/94	92L/12W
544	Ex 2	1		318198	16/6/94	92L/12W
545	Ex 3	1		318199	16/6/94	92L/12W
546	Ex 4	1		318200	16/6/94	92L/12W
547	Ex 5	1		318201	16/6/94	92L/12W

APPENDIX 2

GEOCHEMICAL ANALYSIS CERTIFICATES

Kamaka Resources Ltd.

6074-45A Avenue, Delta, B.C. V4K 1M7

Phone: (604) 940-1591



Chemex Labs Ltd.

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

To: JORDEX RESOURCES INC.
 ATTN: MOE YOUNG
 1410 - 650 W. GEORGIA ST., P.O. BOX 11584
 VANCOUVER, BC
 V6B 4N8

Page Number : 1
 Total Pages : 1
 Certificate Date: 04-APR-94
 Invoice No. : I9413375
 P.O. Number :
 Account : EEP

Project : EXPO
 Comments : ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS A9413375

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648022	205	274	65	< 0.5	14	167	3.68	5	79	8	140	112
648023	205	274	100	< 0.5	15	186	3.73	5	109	10	24	518
648024	205	274	105	< 0.5	14	309	3.60	< 5	63	6	16	106
648025	205	274	205	< 0.5	4	149	3.81	< 5	115	3	12	14
648026	205	274	115	< 0.5	2	66	1.85	5	161	2	12	8
648027	205	274	90	< 0.5	< 1	67	2.83	5	117	< 1	38	8
648028	205	274	110	< 0.5	9	262	1.88	< 5	90	4	16	6
648029	205	274	145	< 0.5	19	336	3.20	< 5	54	10	12	8
648030	205	274	110	< 0.5	2	397	4.74	< 5	101	1	28	8
648031	205	274	40	< 0.5	< 1	27	0.65	5	18	2	6	10
648032	205	274	45	< 0.5	< 1	21	0.54	5	56	1	4	6
648033	205	274	50	< 0.5	< 1	19	0.30	< 5	98	< 1	6	6
648034	205	274	55	< 0.5	7	100	4.09	< 5	115	9	2	8
648035	205	274	65	< 0.5	1	49	0.98	< 5	163	< 1	12	6
648036	205	274	70	< 0.5	1	41	0.59	< 5	237	1	8	6
648037	205	274	90	< 0.5	6	95	1.58	< 5	313	2	8	6
648038	205	274	180	< 0.5	29	891	3.29	< 5	139	19	4	10
648039	205	274	585	< 0.5	30	>10000	4.00	< 5	209	28	6	34
648040	205	274	280	< 0.5	43	925	5.53	< 5	80	28	6	14
648041	205	274	420	< 0.5	74	2720	8.97	< 5	194	44	12	28
648042	205	274	815	< 0.5	39	5980	7.03	< 5	155	28	6	34
648043	205	274	260	< 0.5	24	1245	7.48	< 5	97	29	2	24
648044	205	274	190	< 0.5	25	1060	6.70	5	81	33	< 2	118
648045	205	274	135	< 0.5	32	1720	7.08	< 5	70	28	4	52
648046	205	274	115	< 0.5	28	910	7.82	15	71	23	< 2	212
648047	205	274	135	< 0.5	29	1120	7.37	15	120	14	2	174
648048	205	274	195	< 0.5	17	755	8.84	60	18	11	< 2	456
648049	205	274	130	< 0.5	27	799	7.71	35	102	11	2	282
648050	205	274	275	< 0.5	28	948	9.24	20	159	19	< 2	194
648051	205	274	300	0.5	33	1275	12.40	< 5	125	17	4	38
648052	205	274	260	< 0.5	32	1060	10.65	10	104	23	8	112
648053	205	274	300	< 0.5	25	986	8.32	35	96	28	6	300
648054	205	274	350	< 0.5	26	1190	7.70	75	84	17	6	392
648055	205	274	245	< 0.5	36	958	8.61	10	43	32	2	124
648056	205	274	125	< 0.5	28	565	7.45	10	163	9	< 2	202
648057	205	274	175	< 0.5	26	859	8.25	20	183	8	< 2	270
648058	205	274	150	< 0.5	19	583	7.75	25	258	9	2	316
648059	205	274	290	< 0.5	32	1065	9.11	10	167	16	18	218

Hart Bickler

CERTIFICATION: _____



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

To: JORDEX RESOURCES INC.
 ATTN: MOE YOUNG
 1410 - 650 W. GEORGIA ST., P.O. BOX 11584
 VANCOUVER, BC
 V6B 4N8

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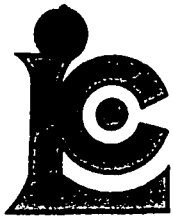
Project : EXPO
 Comments: ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS A9413383

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648060	205 274	280	0.5	48	2050	11.90	< 5	236	28	20	268
648061	205 274	410	< 0.5	29	1020	7.33	< 5	201	11	40	126
648062	205 274	540	< 0.5	24	2950	6.57	< 5	110	6	30	106
648063	205 274	405	0.5	23	2380	5.75	< 5	132	6	50	222
648064	205 274	225	0.5	22	1645	5.12	< 5	174	6	24	384
648065	205 274	345	0.5	26	2240	7.56	< 5	233	6	34	220
648066	205 274	235	< 0.5	25	1270	8.81	< 5	140	9	26	54
648067	205 274	315	0.5	25	1395	7.18	< 5	152	4	18	46
648068	205 274	350	< 0.5	23	2440	5.93	< 5	111	6	16	86
648069	205 274	280	0.5	23	2030	9.44	< 5	143	5	22	60
648070	205 274	160	< 0.5	25	2200	8.27	< 5	127	4	12	40
648071	205 274	240	< 0.5	20	1270	4.17	< 5	163	6	16	34
648072	205 274	155	< 0.5	21	1200	3.91	< 5	373	8	12	14
648073	205 274	100	< 0.5	14	1290	3.01	< 5	295	5	4	16
648074	205 274	150	< 0.5	23	932	5.47	< 5	140	9	12	16
648075	205 274	90	< 0.5	17	664	6.09	< 5	53	8	8	18
648076	205 274	120	< 0.5	21	655	5.13	< 5	25	7	6	26
648077	205 274	120	< 0.5	25	254	6.00	< 5	10	8	4	6
648078	205 274	50	< 0.5	22	306	5.22	< 5	8	7	8	6
648079	205 274	45	< 0.5	21	339	5.16	30	2	6	22	38

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Hart Buchler



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Account : EEP

Project : EXPO
Comments: ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS A9413382

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648080	205	274	60	< 0.5	17	370	6.00	275	17	6	20	30
648081	205	274	40	< 0.5	21	452	3.28	40	4	9	12	6
648082	205	274	70	< 0.5	17	598	3.47	10	52	7	18	8
648083	205	274	60	< 0.5	22	247	5.07	10	33	10	14	8
648084	205	274	70	< 0.5	26	257	6.59	< 5	7	11	14	8
648085	205	274	20	< 0.5	23	388	3.25	5	32	9	8	4
648086	205	274	40	< 0.5	12	867	3.32	< 5	4	5	6	8
648087	205	274	< 5	< 0.5	21	182	6.69	5	3	9	6	12

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 Account : EEP

Project : EXPO
 Comments: ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS A9413228

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648001 H	205	274	30	< 0.5	< 1	49	2.03	5	86	2	4	6
648002 H	205	274	55	< 0.5	< 1	69	2.95	5	90	2	2	6
648003 H	205	274	345	< 0.5	< 1	147	7.94	< 5	906	< 1	8	10
648004 H	205	274	75	< 0.5	< 1	45	1.62	5	126	2	2	8
648005 H	205	274	35	< 0.5	< 1	20	0.58	5	35	2	4	4
648006 H	205	274	40	< 0.5	< 1	24	0.73	5	24	2	< 2	4
648007 H	205	274	35	0.5	< 1	33	1.13	5	95	1	4	4
648008 H	205	274	40	< 0.5	< 1	50	1.87	5	169	1	2	20
648009 H	205	274	55	< 0.5	< 1	48	1.33	5	315	1	6	4
648010 H	205	274	45	< 0.5	< 1	21	0.56	5	94	2	4	4
648011 H	205	274	30	< 0.5	< 1	30	0.77	5	88	2	4	2
648012 H	205	274	40	< 0.5	< 1	31	0.92	5	89	1	2	2
648013 H	205	274	65	< 0.5	< 1	26	0.79	5	96	2	4	4
648014 H	205	274	80	< 0.5	< 1	54	1.19	< 5	106	1	6	4
648015 H	205	274	140	< 0.5	4	124	1.72	< 5	90	2	6	16
648016 H	205	274	385	< 0.5	< 1	209	6.59	< 5	213	< 1	12	22
648017 H	205	274	275	0.5	< 1	175	7.20	< 5	284	< 1	8	12
648018 H	205	274	185	< 0.5	< 1	86	3.20	< 5	74	1	12	6
648019 H	205	274	125	< 0.5	< 1	84	3.70	5	229	2	20	6
648020 H	205	274	65	< 0.5	3	100	3.13	< 5	68	2	20	4
648021 H	205	274	60	0.5	13	171	2.90	5	60	7	54	54

CERTIFICATION: Yhai J Ma



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 Invoice No. : I9413381
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 Account : EEP

Project : EXPO
 Comments: ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS A9413381

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648088	205 274	15	< 0.5	13	39	2.22	< 5	4	6	< 2	8
648089	205 274	10	< 0.5	30	29	4.64	< 5	4	11	2	4
648090	205 274	10	< 0.5	17	18	3.25	< 5	3	6	4	4
648091	205 274	30	< 0.5	11	112	5.19	< 5	3	5	8	6
648092	205 274	15	< 0.5	5	81	2.67	< 5	3	3	6	4
648093	205 274	< 5	< 0.5	3	75	2.43	< 5	9	3	26	2
648094	205 274	< 5	< 0.5	2	48	2.38	< 5	4	1	8	2
648095	205 274	25	< 0.5	7	51	3.01	< 5	10	4	4	4
648096	205 274	10	< 0.5	21	324	6.15	125	4	10	4	28
648097	205 274	< 5	< 0.5	21	106	5.02	230	7	17	< 2	54
648098	205 274	20	< 0.5	19	42	4.39	5	10	12	6	4

CERTIFICATION:

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to: JORDEX RESOURCES INC.
ATTN: MOE YOUNG
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VANCOUVER, BC
V6B 4N8

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Account : EEP

Project: EXPO
Comments: ATTN: MOE YOUNG CC: PETER DASLER

CERTIFICATE OF ANALYSIS

A9413463

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648099	205 274	30	< 0.5	23	150	7.37	585	15	9	6	62
648100	205 274	< 5	< 0.5	24	160	5.35	550	3	9	< 2	58
648101	205 274	< 5	< 0.5	27	172	5.47	810	4	11	< 2	64
648102	205 274	< 5	< 0.5	33	107	6.45	1010	< 1	10	< 2	62
648103	205 274	20	< 0.5	27	118	6.94	350	1	10	2	48
648104	205 274	< 5	< 0.5	20	67	5.18	10	4	9	< 2	4
648105	205 274	< 5	< 0.5	29	115	3.85	< 5	8	14	< 2	2
648106	205 274	< 5	< 0.5	37	53	4.66	5	26	17	2	4
648107	205 274	< 5	< 0.5	18	22	2.83	5	6	9	2	2
648108	205 274	< 5	< 0.5	28	37	4.17	5	8	14	< 2	4
648109	205 274	< 5	< 0.5	29	146	5.22	65	7	13	4	30

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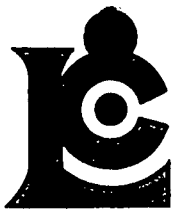
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CERTIFICATE OF ANALYSIS A9413520

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
	648110	205	274	15	< 0.5	21	209	5.98	345	1	10	< 2
648111	205	274	25	< 0.5	21	131	4.80	135	1	8	2	48
648112	205	274	< 5	< 0.5	19	90	3.93	35	4	9	4	16
648113	205	274	20	< 0.5	21	91	5.19	5	6	9	4	4
648114	205	274	< 5	< 0.5	10	36	2.47	< 5	3	4	2	4
648115	205	274	50	< 0.5	23	337	5.28	< 5	16	11	2	8
648116	205	274	80	< 0.5	23	173	6.92	5	20	10	4	8
648117	205	274	40	< 0.5	19	401	5.00	< 5	2	9	< 2	6
648118	205	274	45	< 0.5	22	252	5.02	< 5	2	10	< 2	6
648119	205	274	20	< 0.5	30	138	8.17	< 5	3	15	2	10
648120	205	274	30	< 0.5	30	77	6.08	< 5	10	16	< 2	6
648121	205	274	25	< 0.5	23	142	6.11	5	11	15	< 2	8
648122	205	274	20	< 0.5	23	114	5.76	5	2	12	< 2	10
648123	205	274	15	< 0.5	30	127	6.06	< 5	1	37	< 2	8

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 Account : EEP

Project : EXPO
 Comments : ATTN: MOE YOUNG CC: P. DASLER

CERTIFICATE OF ANALYSIS A9414051

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648124	205 274	40	< 0.5	34	162	7.29	< 5	6	19	2	14
648125	205 274	10	< 0.5	12	72	2.13	< 5	6	7	2	4
648126	205 274	25	< 0.5	12	73	2.81	< 5	3	4	2	6
648127	205 274	25	< 0.5	14	102	3.64	< 5	2	3	2	4
648128	205 274	30	< 0.5	8	84	1.57	< 5	8	2	< 2	4
648129	205 274	35	< 0.5	18	96	3.62	< 5	7	7	4	8
648130	205 274	20	< 0.5	18	83	4.34	< 5	3	4	2	6
648131	205 274	30	< 0.5	15	104	4.73	< 5	19	5	4	4
648132	205 274	25	< 0.5	14	355	3.22	< 5	4	5	4	12
648133	205 274	< 5	< 0.5	14	109	3.66	< 5	2	6	< 2	8
648134	205 274	< 5	< 0.5	17	138	4.41	< 5	3	6	< 2	8
648135	205 274	< 5	< 0.5	18	52	3.40	< 5	3	5	2	4
648136	205 274	20	< 0.5	17	71	4.25	< 5	2	7	2	6
648137	205 274	5	< 0.5	17	62	4.34	< 5	3	6	2	8
648138	205 274	< 5	< 0.5	16	73	4.05	5	4	4	4	12
648139	205 274	5	< 0.5	19	155	4.40	< 5	10	10	2	14
648140	205 274	15	< 0.5	19	64	3.67	< 5	6	9	< 2	16
648141	205 274	5	< 0.5	18	108	3.74	5	3	8	< 2	18
648142	205 274	20	< 0.5	6	430	2.16	< 5	7	6	4	28
648143	205 274	30	< 0.5	8	1040	4.30	< 5	12	4	8	28
648144	205 274	35	< 0.5	11	993	3.86	< 5	18	4	4	56
648145	205 274	30	< 0.5	10	546	3.65	5	11	4	6	46

CERTIFICATION:

Yhai J Ma



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 Account : EEP

Project : EXPO
 Comments: ATTN: MOE YOUNG CC: P. DASLER

CERTIFICATE OF ANALYSIS A9413870

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648146	205	274	40	< 0.5	12	987	4.20	5	21	3	14	66
648147	205	274	25	< 0.5	6	355	3.02	40	18	1	20	162
648148	205	274	35	< 0.5	6	687	3.62	20	26	1	10	76
648149	205	274	40	< 0.5	6	667	3.98	45	19	1	36	156
648150	205	274	50	< 0.5	15	421	3.64	5	16	7	4	36
648151	205	274	30	< 0.5	6	418	2.50	5	15	2	8	28
648152	205	274	45	< 0.5	8	690	4.11	130	27	1	20	132
648153	205	274	300	< 0.5	< 1	42	2.36	< 5	46	< 1	14	4
648154	205	274	240	< 0.5	< 1	41	1.33	5	72	< 1	14	6
648155	205	274	150	< 0.5	< 1	21	0.63	< 5	73	< 1	8	2
648156	205	274	105	< 0.5	< 1	19	0.77	< 5	113	< 1	6	2
648157	205	274	35	< 0.5	< 1	38	1.84	< 5	221	< 1	16	4
648158	205	274	75	< 0.5	< 1	58	1.92	< 5	91	< 1	16	4
648159	205	274	180	< 0.5	< 1	47	2.47	< 5	184	< 1	12	4
648160	205	274	295	< 0.5	< 1	43	1.85	< 5	294	< 1	40	2
648161	205	274	590	< 0.5	< 2	89	4.47	< 5	168	< 1	20	6
648162	205	274	215	< 0.5	< 1	22	0.65	< 5	32	< 1	8	2
648163	205	274	255	< 0.5	< 1	34	1.08	< 5	33	< 1	6	2

CERTIFICATION: *Hart Buchler*



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SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648190	205 274	105	< 0.5	3	164	1.03	< 5	56	2	2	6
648191	205 274	< 5	< 0.5	< 1	22	0.34	< 5	60	1	2	6
648192	205 274	10	< 0.5	< 1	39	0.63	5	19	1	4	6
648193	205 274	< 5	< 0.5	1	38	1.06	5	11	1	6	6
648194	205 274	20	< 0.5	4	223	1.13	5	13	3	6	10
648195	205 274	15	< 0.5	1	34	0.70	< 5	11	1	2	4
648196	205 274	10	< 0.5	1	33	0.44	< 5	16	2	2	6
648197	205 274	25	< 0.5	1	31	0.54	< 5	11	1	2	6
648198	205 274	15	< 0.5	1	33	0.21	< 5	9	1	< 2	6
648199	205 274	215	< 0.5	14	817	3.89	< 5	65	6	6	14
648200	205 274	95	< 0.5	3	284	1.48	< 5	42	1	4	4

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 Comments: ATTN: MOE YOUNG CC: P. DASLER

CERTIFICATE OF ANALYSIS A9414052

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648164	205	274	245	< 0.5	< 1	44	1.49	5	221	1	14	4
648165	205	274	270	< 0.5	< 1	35	1.03	5	100	1	24	6
648166	205	274	440	< 0.5	1	120	5.98	5	341	1	48	12
648167	205	274	295	< 0.5	< 1	70	1.72	15	53	21	14	8
648168	205	274	360	< 0.5	< 1	56	2.23	5	90	2	12	8
648169	205	274	445	< 0.5	< 1	244	10.05	< 5	352	1	34	12
648170	205	274	425	< 0.5	2	197	5.24	5	140	2	22	10
648171	205	274	305	< 0.5	5	1340	3.61	10	116	5	20	12
648172	205	274	300	< 0.5	< 1	95	3.20	5	73	2	12	4
648173	205	274	340	< 0.5	< 1	171	5.89	< 5	258	1	22	8
648174	205	274	335	< 0.5	2	355	7.61	< 5	213	1	20	12
648175	205	274	480	< 0.5	15	3870	2.90	< 5	179	6	10	14
648176	205	274	300	< 0.5	31	289	3.47	5	142	15	6	8
648177	205	274	175	< 0.5	19	109	2.69	< 5	97	9	2	6
648178	205	274	70	< 0.5	< 1	38	0.94	5	120	2	4	10
648179	205	274	85	< 0.5	< 1	37	0.90	5	76	2	8	10
648180	205	274	85	< 0.5	1	45	0.74	< 5	103	1	2	2
648181	205	274	105	< 0.5	11	154	2.01	< 5	69	6	4	6
648182	205	274	120	< 0.5	1	49	0.79	15	115	2	6	6
648183	205	274	90	< 0.5	4	134	1.79	5	82	2	8	8
648184	205	274	200	< 0.5	24	1445	3.95	< 5	47	11	4	12
648185	205	274	275	< 0.5	46	1470	4.94	< 5	69	14	8	12
648186	205	274	430	< 0.5	41	1630	8.76	5	31	15	20	30
648187	205	274	320	< 0.5	18	913	10.15	5	42	9	28	32
648188	205	274	460	< 0.5	16	1180	10.05	5	65	9	34	26
648189	205	274	430	< 0.5	30	1600	11.40	< 5	138	11	54	46

CERTIFICATION: _____

Jhai D Ma



Chemex Labs Ltd.

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

TERRACORDEX RESOURCES INC.
 ATTN: MOE YOUNG
 1410 - 650 W. GEORGIA ST., P.O. BOX 11584
 VANCOUVER, BC
 V6B 4N8

Page Number : 1
 Total Pages : 2
 Certificate Date: 25-APR-94
 Invoice No. : I9414754
 P.O. Number :
 Account : EEP

Project : EXPO
 Comments: ATTN: MOE YOUNG CC:PETER DASLAR

CERTIFICATE OF ANALYSIS A9414754

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
648264	205	274	185	< 0.5	11	1760	4.41	80	69	2	6	96
648265	205	274	160	< 0.5	4	1730	1.87	90	36	2	6	78
648266	205	274	90	< 0.5	3	978	2.49	165	42	< 1	8	136
648267	205	274	55	< 0.5	3	1175	2.26	150	41	1	6	120
648268	205	274	35	< 0.5	3	636	2.09	195	97	1	6	132
648269	205	274	50	< 0.5	3	648	2.18	195	115	1	6	142
648270	205	274	105	0.5	7	869	3.00	130	93	1	10	70
648271	205	274	55	< 0.5	6	1150	2.89	150	76	1	2	102
648272	205	274	145	0.5	7	1625	2.89	150	77	1	4	92
648273	205	274	60	0.5	7	1125	3.04	220	75	2	< 2	112
648274	205	274	165	0.5	9	1975	4.56	160	93	1	2	84
648275	205	274	120	0.5	9	1475	4.73	195	114	1	2	112
648276	205	274	155	0.5	10	1580	4.56	180	86	1	4	96
648277	205	274	170	0.5	6	1550	4.66	115	97	1	2	72
648278	205	274	155	1.0	9	1400	4.27	210	81	< 1	2	98
648279	205	274	85	0.5	9	1140	4.00	250	48	1	14	136
648280	205	274	140	0.5	10	1405	6.33	285	45	1	8	198
648281	205	274	330	1.5	10	1895	6.70	255	94	2	14	244
648282	205	274	165	1.0	14	1760	5.91	250	56	1	4	162
648283	205	274	180	1.0	12	1870	5.67	290	44	1	6	124
648284	205	274	130	0.5	14	1775	5.25	370	39	2	6	142
648285	205	274	200	1.0	18	2270	6.71	320	63	1	4	172
648286	205	274	80	< 0.5	20	1010	4.74	505	27	50	4	112
648287	205	274	40	< 0.5	23	466	5.26	765	6	84	< 2	94
648288	205	274	< 5	< 0.5	25	64	4.62	1080	< 1	84	< 2	76
648289	205	274	265	< 0.5	18	2010	7.59	275	43	21	8	70
648290	205	274	170	< 0.5	18	1230	6.53	245	37	24	4	38
648291	205	274	300	< 0.5	23	1865	6.50	305	27	35	2	68
648292	205	274	180	< 0.5	22	1105	9.57	210	18	21	14	56
648293	205	274	15	< 0.5	24	66	4.85	870	< 1	73	< 2	78
648294	205	274	220	< 0.5	20	1175	6.29	540	21	38	18	202
648295	205	274	155	< 0.5	16	1020	5.64	435	19	30	6	176
648296	205	274	100	< 0.5	20	658	5.63	480	10	47	4	100
648297	205	274	140	< 0.5	21	953	5.27	600	19	23	4	100
648298	205	274	300	< 0.5	17	1870	7.80	55	34	2	6	90
648299	205	274	380	0.5	14	3040	6.90	5	44	2	14	182
648300	205	274	235	0.5	17	2170	6.35	10	26	2	12	324
648301	205	274	305	0.5	18	2450	6.06	275	30	1	12	594
648302	205	274	175	< 0.5	17	956	7.82	10	20	3	10	82
648303	205	274	210	< 0.5	16	1595	7.99	355	18	2	6	254

CERTIFICATION: Hart Buchler



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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

JORDEX RESOURCES INC.
ATTN: MOE YOUNG
1410 - 650 W. GEORGIA ST., P.O. BOX 11584
VANCOUVER, BC
V6B 4N8

Project : EXPO
Comments: ATTN: MOE YOUNG CC:PETER DASLAR

Page Number : 2
Total Pages : 2
Certificate Date: 25-APR-94
Invoice No. : 19414754
P.O. Number :
Account : EEP

CERTIFICATE OF ANALYSIS

A9414754

SAMPLE	PREP CODE		Au ppb	Ag	Co	Cu	Fe	Mn	Mo	Ni	Pb	Zn
			FA+AA	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
648304	205	274	195	< 0.5	17	1800	6.45	35	27	3	12	254
648305	205	274	200	0.5	17	1785	7.52	30	29	2	16	586
648306	205	274	110	0.5	16	1340	7.77	10	26	2	8	256

CERTIFICATION:

Hart Bichler

APPENDIX 3

DRILL LOGS

Kamaka Resources Ltd.

6074-45A Avenue, Delta, B.C. V4K 1M7

Phone: (604) 940-1591

PROJECT EXPO
 CONTRACTOR Olympic Drilling & Consulting
 DATE STARTED March 9/94 COMPLETED March 13/94
 LOGGED BY D. J. Pawliuk

T.D. 271.58 m
 INCLINATION -90°
 COORDINATES _____
 SURVEY REFERENCES 243970 N / 232787 E ±
 COLLAR ELEVATION 2210' asl ±
 BEARING _____

Folage (m)	ALTERATION											STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE 1" = 2m BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT				
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb Zoo	Garnet		Pyroxene	Amphibole	Wollastonite	Sulf Vems	Frac Inten					Est Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄
NQ core throughout; casing pulled; anchor left. 271.56 acid test																									
0																							0.0 - 6.71 m CASING		
2																							overburden and friable, limonite-cemented bedrock	SILICEOUS BRECCIA. Light orange brown to light brown to watery grey, fine grained rock with a clastic texture. Granule-size clasts av. 4 or 5 mm across (max 30mm) of watery grey siliceous rock within a matrix of fine silica sand. The entire unit is weakly but pervasively silica-indurated. 3% limonite as pervasive stain (mostly light orange-brown) and also as dark brown fracture coating. Cavities av. 2 to 5 mm across throughout say 3% rock volume; possibly sulphides have been weathered-out from these or less likely clays washed-out during drilling. Cavities lined with fine drusy qtz xtals @ 20.1 m depth.	
4																									
6																									
8																							q.v. 15 mm wide @ 17° dk brown hem band 4 mm @ 50° red brown hem 1 mm wide on fract @ 30°		
10																									
12																									

see separate sheet

648001 H
648002 ←

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58 m
 COLLAR ELEVATION _____
 INCLINATION _____
 BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION											STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metalization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT						
	Core Recovery	Oxide	Quartz	Sericite	Clay/Prop	Bitite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet		Pyroxene	Amphibole	Wollastonite	Sulf Veins	Frac Inter	Est. Cu. Mo					CuFeS ₂	FeS	CuFeS ₂	Fe ₂ O ₃	MoS ₂	
12																									648002	gtz vltts to 3 mm	Local traces reddish hem.	
14																									648003	healed late bx band @ 45° possible healed f.f.t. 2 dk brown lmt seam av. 8 mm wide @ 10°	Local 1% grey sooty py below 21.3 m. Watery grey, broken, brecciated gtz vltts av. 1% rock volume, locally to 5 or 10% over 50 to 70 cm interval. Qtz veins up to 4 cm wide. Qtz veins, vltts mostly between about 50° and 75° to core axis.	
16																									648004	randomly oriented gtz vltts 2 mm wide.	clay content 1 or 2% ; silica 95 - 97% rock. Gradual increase in clast size with depth, rock becoming more typical siliceous breccia.	
18																									648005	5% gtz vltts. drusy gtz xtals line cavities. late bxa band 19 cm wide @ 40° sugary qtz sand matrix local 1% py below this depth. q.v. 22 mm @ 30°	Good core recovery throughout hole except at faults where wide intervals of soft, broken, clay-rich rock present.	
20																									648006	sooty py along irreg. fracture @ ~ 20° q.v. (into silicified band) 45 mm @ 40° off-white q.v. 10 mm @ 40°		
22																												
24																												

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58 m
 COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION												STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE $\frac{1''}{2m}$ BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT			
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet	Pyroxene		Amphibole	Wollastonite	Sulf Veins	Frac Inten	Est Cu, Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄
24																								648006	randomly oriented gte vths to 3 mm	
26																								648007	late br band @ 30°; clasts to 3 cm across in sandy matrix dk brown lmat 1mm on irreg fracture @ ~ 25°	
28																								648008	1% red hem	
30																								648009	1% blk grey gte vths.	
32																								648010	watery grey intensely silica-indurated interval. v.f. diss grey sooty py.	
34																										
36																										

HOLE NO E2-211

DRILL LOG

Page 4 of 23

PROJECT EXPO

T.D. 271.58 m

COLLAR ELEVATION _____

CONTRACTOR Olympic

INCLINATION _____

BEARING _____

DATE STARTED _____ COMPLETED _____

COORDINATES _____

LOGGED BY DJP

SURVEY REFERENCES _____

Footage	Core Recovery	Oxide	ALTERATION										STR.		VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2 m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT
			Quartz	Sericite	Clay (yp)	Biottle	K-spar	Chlorite	Epidote	Carb Zoo	Garnet	Pyroxene	Amphibole	Wollastonite	Sulf Veins	Frac Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄				

36																																									
38																																									
40																																									
42																																									
44																																									
46																																									
48																																									

648010
 bkn qtz vlt 3 mm wide

648011
 1% qtz vlt 3 mm
 av. $\approx 60^\circ$ to c.a.

648012

648013
 medium grey qtz vlt, bkn,
 2 mm abt, $\approx 5^\circ$ poss. contains v. f. diss py.

648014

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58 m
 INCLINATION _____
 COORDINATES _____
 SURVEY REFERENCES _____
 COLLAR ELEVATION _____
 BEARING _____

Footage	ALTERATION													STR.		VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1"=2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT				
	Core Recovery	Oxide	Quartz	Sericite	Propylite	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet	Pyroxene	Amphibole	Wollastonite	Sulf Veins	Frac Inten	Est Cu. Mo	CuFeS ₂	FeS ₂	C ₄ FeS ₄	Fe ₂ O ₃					MnS ₂	Hem		
-60																									5	648018	hem-rich band at 75°	59.28-66.55 LATE BRECCIA. Light brownish orange to watery grey to red to cream. 85% silica 10% clays, 3% red hem, 2% Imat. More clay-rich and more intensely brecciated than overlying unit; also more hematite.	
-62																									5	648019			
-64																									1	648020	hem-rich band at 75°	66.55-71.81 FAULT ZONE. Light grey to pale grey to brownish grey, soft, with say 20% subangular clasts up to 30 mm (av. 5 mm) in a matrix of crushed, clay-rich rock with 2% to locally say 6% fine, sooty grey py grains. Py also as grains to 3 mm, and up to 40% sil' br fragment at 70.1 m depth.	
-66																									3 tr	648021	fault; 10cm clayey gouge + sand-size rock fragments.		
-68																									5 tr	648022	QFP frag within breccia.		
-70																									2 tr	648023	bn v.f. specks + rimming py fault; 30 cm mod. to f. bkn at 76°.		
-72																									6 tr	648024	crushed py masses to 12 mm across. clayey slip at 55°.		
																											sil' br frag contains 40% py; frag 20mm across.		
																											slip at 20 cm pale grey clay between slips at 45°.		
																											slip at 10 cm pale grey clay.		

HOLE NO. EC-211

DRILL LOG

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PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION											STR.	VISUAL EST.						Sample No & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT
	Core Recovery	Oxide	Quartz	Sericite	Clayprop	Biotite	K-spar	Chlorite	Epidote	Carb Zoo	Garnet		Pyroxene	Amphibole	Wollastonite	Sulf Vens	Frac Inten	Est Cu. Mo				

72																										648022	▷	<p>71.81-81.03 LATE BRECCIA Light grey coarse grained rock with about 50% coarse clasts (various lithologies, subangular, av. 10mm, max. 15mm) in a clay-py-silica matrix. Matrix can be scratched with knife but is harder and more cemented than material between coarser clasts in overlying fault zone. Rare gtz vltts.</p> <p>81.03-84.02 SILICEOUS KAOLINITE BX. Pinkish cream to watery grey with the yellow brown limt patches. 70% silica, 30% kaolinite(?) - off white clays as subground to irreg masses up to few cm across. Say 3% gtz vltts. Clay content increases with depth.</p>	
74																										648023	▷		
76																										648024	▷		
78																										648025	▷		
80																										648026	▷		

bn speckles
 irreg, bkn py vltts to 2mm wide @ ≈ 60° to c.a. irreg hairline bn(?) vltts to 10mm long.
 bn rimming py mass, cpy(?) specks
 flt, 6mm clay f. bkn on irreg fracture @ ≈ 10°
 randomly oriented q.v.s to 6mm wide.

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58 m
 INCLINATION _____
 COORDINATES _____
 SURVEY REFERENCES _____

COLLAR ELEVATION _____
 BEARING _____

Footage	ALTERATION											STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT				
	Core Recovery	Oxide	Quartz	Sericite	Chlorite	Epidote	Carb Zoo	Garnet	Pyroxene	Amphibole	Wollastonite		Sulf Veins	Frac Inten	Est Cu. Mo	CuFeS ₂	FeS ₂	CuFeS ₂					Fe ₂ O ₃	MoS ₂	hem	
-87																						678026		upper margin @ 25°	87.02-86.03 FAULT ZONE. 54% silica, 40% clay, 2% limst, 4% hematite. Grey-red to light brownish grey to cream coloured. Subangular sil bx and kaolinite clasts to 4 cm in a clay-sand grain-hem-lmst matrix. Upper margin @ about 25°.	
-86																						678027		fault zone.		
-88																						678028		prob. ft; 7mm clay + f. bkn on fracture @ 50°		
-90																						678029		Fault; 10 cm clay + f. bkn core.		
-92																						678030		bn specks		
-94																								watery grey gtz vltts to 4 mm.		
-96																								qtz vltts to 4mm @ 55°		
																								Fault @ ≈ 60°		

HOLE NO LC 211

DRILL LOG

Page 7 of 23

PROJECT EXPO
CONTRACTOR Olympic
DATE STARTED _____ COMPLETED _____
LOGGED BY DJP

T.D. 271.58m
INCLINATION _____
COORDINATES _____
COLLAR ELEVATION _____
BEARING _____
SURVEY REFERENCES _____

Footage	ALTERATION														STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE 1"=2m BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT									
	Core Recovery	Oxide	Quartz	Sericite	Calc Pyro	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet	Pyroxene	Amphibole	Wollastonite		Sulf Vens	Frac Inten	Est Cu Mo	CuFeS ₂	FeS ₂					Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂						
96																									648030			Fault, @ 60°			96.30-104.13 LATE BRECCIA. Light brown to pale brown-cream to watery grey, medium to coarse grained with subround clasts av. 8-12 mm across, max. to 75 or 80 mm, in a matrix of fine siliceous sand that has been indurated by silica. This late breccia has itself been brecciated with cream-brown kaolinite (locally silica indurated) as matrix. Silica 90%, Kaolinite 9%, Imp 1%. Discrete contact with underlying unit at about 50'; contact irregular.		
98																									648031						or greywacke?		
100																									648032						speck bn in siliceous clast.		
102																									648033								
104																									648034						speckles bn in siliceous rock.		
106																																	
108																																	

mainly pyrophyllite -> mainly kaolinite

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58 m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	Core Recovery	Oxide	Quartz	ALTERATION											STR.	VISUAL EST.						Sample No. & Interval	LOG	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT
				Sericite	Clay (mp)	Bohite	K-spar	Chlorite	Epidote	Carb Zoo	Garnet	Pyroxene	Amphibole	Wollastonite		Sulf Veins	Frac Inter	Est Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄		Fe ₂ O ₃		
120			S	S																	648038				
122			S	S																	648039		bn speckles throughout.		
124			S	S																	648040		covellite (?) 0.5x 2mm mass.		
126			S	S																	648041		wispy py + bn vlt's to 2mm @ 65°		
128			S	S																	648042		watery grey qtz vlt's to 5mm @ 35°		
130			S	S																	648043		q.v. 10mm @ 50° w. py.		
132			S	S																	648044				

increasing kaoln.

PROJECT EXPO
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 271.58m COLLAR ELEVATION _____
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 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION													STR.	VISUAL EST.						Sample No & Interval	LOG	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT						
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Bohile	K-spar	Chlorite	Epidoie	Carb Zoo	Garnet	Pyroxene	Amphibole		Wollastonite	Sulf Vens	Frac Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂		CuFeS ₂			Fe ₂ O ₃	MoS ₂	SCALE 1"=2m	BASIC GEOLOGY: rock types, metallization, structures alterations, one column system		
132																		+	5	tr						648043	late bx; py locally rims coarse frags; various lithologies. bx contact @ ~ 30°.	134.00 - 165.85	ANDESITE (BASALT) VOLCANIC BRECCIA. Medium greyish green to light yellow-brown (clay-ald) to light grey with local pale yellow and cream coloured patches. Medium grained. Rock has undergone moderate to intense S-C-C alteration. Dark green, irregular rounded clots of chlorite (+ magnetite) throughout have been variably altered to kaolinitic clays; in places only small remnants a couple of mm across are all that remain of original chloritic clots. Waxy bluish green squawserite? seen in 100% of interval. Moderately magnetic 147.25 → 187.5, except for few patches where abund. clay minerals present. Rare gte lens, ults.	
134																	+	5	tr						648044	py as wispy, diss masses. FAULT; 5 cm mod. bkn core + grey gouge or fracture @ approx 28°.				
136																	+	5	tr						648045	wispy py ults to 2 mm flt; 5 mm f. bkn + pale grey gouge @ 35°				
138																	+	5	tr						648046	irreg. bkn gte ults flt; 15 mm f. bkn core. brown pyrophyllite. late bx band 25 cm wide above flt w. 6 mm pale grey gouge @ 30°				
140																	+	5	tr						648047	wispy py ults to 1 mm				
142																	+	5	tr						648048	qp mass 3mm across				
144																	+	5	tr						648049	py + bn ults subparallel c.a.				

Handwritten notes in the alteration columns:
 Pyrop
 Bohile
 K-spar
 Chlorite
 Epidoie
 Carb Zoo
 Garnet
 Pyroxene
 Amphibole
 Wollastonite
 Sulf Vens
 Frac Inten
 Est. Cu. Mo

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	Core Recovery	Oxide	Quartz	Sericite	Chlorite	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet		Pyroxene	Amphibole	Wollastonite	Sulf Veins	Frac Inten	Est Cu Mo					CuFeS ₂	FeS ₂	CuFeS ₂	Fe ₃ O ₄	MnS ₂
156																									578050	← 4 cp v. fine specks in mag clot few mm across. pale grey q.v.'s to 17 mm wide subparallel c.a. prob. flt; 5 mm crushed, clay-rich core + gouge @ 70°.	
158																									678051	late bx band; coarse clasts various lithologies pyritic matrix; @ 30°	165.85 - 172.69 LATE BRECCIA. Dark green to black to light greenish brown, coarse grained with large subangular clasts of volcanic breccia comprising about 75% of rock volume; these clasts av. 2 or 3 cm across, max 8 to 10 cm. Subangular Coarser clasts 80% sil/bx over lowermost 1.5 m, av. 10 mm across. Have not before seen late breccia with as many andesitic volc coarse clasts anywhere else at Hushamu.
160																									678052	late bx band @ 20° ft. smear grey gouge @ 35°	
162																									678053	irreg mag ults to 15 mm long.	
164																										late breccia;	
166																										cp speckles in matrix w. diss py.	
168																											

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	Core Recovery	Oxide	Quartz	Sericite	Clay (Prop)	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet	Pyroxene	Amphibole		Wollastonite	Sulf Veins	Frac Inten	Est Cu. Mo	CuFeS ₂	FeS ₂					Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂
216																								648069	rock brown colour, sdy 15 or 20% pyrophyllite.	ANDESITE TUFF (?) continued. Uniform, monotonous unit.	
218																							648070	late bx band @ ≈ 65° coarse clasts various lithologies; abund diss py in matrix. cp specks seen.			
220																							648071				
222																							648072	metallic mineral possibly bn (?hem)			
224																							648073	ftt; 15 mm crushed core + off-white clay on fracture @ 30° to c.a.			
226																							648074	ftt; 4 mm white clay + f. bkn @ 35° ftt; 6 mm f. bkn + white clay on irreg. fracture subparallel c.a.			
228																							648075	covellite? rock has smoky, bluish tinge			

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	Core Recovery	Oxide	Quartz	Sericite	Clay (mp)	Biotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet		Pyroxene	Amphibole	Wollastonite	Sulf Vens	Frac Inten					Est Cu, Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂
228																									678073	q.v. 10 mm wide @ 40°	
230																									678074	flt; 10 mm f. bkn core + white clay on pyritic slip @ 31° to c.a.	
232																									678075	fault; 25 cm f.bkn + gouge; @ ?? 60° pale aqua sericite(?) along irreg. fracture stc. py band 12 mm wide @ 30° to c.a.	
234																									678076	intensely brecciated; abundant cream coloured clay (~30%) within matrix. spots pale aqua sericite to 4 mm, subround. somewhat bkn to moderately bkn core.	
236																									678077	late bx band 5 cm wide @ 55° contains a few sp(?) specks to 1 mm across; say 10% py in matrix. py band 5 mm @ 40°	
238																									678078	wispy, lensoid py bands to 5 mm wide, irreg. + randomly oriented.	
240																											

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	Core Recovery	Oxide	Quartz	Sericite	Clay Prop.	Blotite	K-spar	Chlorite	Epidote	Carb Zeo	Garnet	Pyroxene		Amphibole	Wollastonite	Sulf. Veins	Frac Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	CuFeS ₂	FeO	MoS ₂ & Asen	
252																								8	678081	py bands to 15 mm @ 85°; poss. hld flt. fault; 5 mm f. bkn @ 50°	ANDS TUFF continued	
254																								1	678082	pyrophyllite coating on fracture str @ 40° 2 wkly brecciated		
256																								3	678083	py in 10 mm @ 45° diss py masses to 10x30 mm.		
258																								3	678084	fault; 6 mm f. bkn	clayey gouge @ 55°	
260																								4	678085	50% f. diss py in band	2 cm wide @ 30°	
262																								3	678086	py vltc. @ 15°		
264																								7	678087	fault; 40 cm moderately bkn core + off-white clayey gouge between slips @ 50° to 60°		
266																								4	678088	py vlt 3 mm @ 40°		

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	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyro	Biotite	K-spar	Chlorite	Epidote	Carb. Zoo	Garnet	Pyroxene		Amphibole	Wollastonite	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	FeO ₂	MoS ₂	1cm
264																									64805	py band 10 mm wide @ 60° w. trace cp + moly (?) mass 3 mm across along margin fault; 15 cm f. bkn core; ? orientation.	ANDS TUFF (?) continued. Major fault zone below 268.2 with moderately bkn core and poor recovery throughout.	
266																									64806	fault; 30 cm mod py vlt to 3 mm @ 50° fault; 30 cm fault; 4 cm gouge	bkn core; ? orientation. f. bkn + gouge; ? orientation. + f. bkn; ? orientation.	
268																									64807	fault; 10 mm gouge + f. bkn @ 33° fault; 20 mm " pale smoky blue pyrophyllite vlt 8 mm wide @ 55°	" " " ; ? orientation.	
270																										fault; 10 cm gouge + f. bkn core between fractures at about 30° to c.a.	271.58 m END OF HOLE	

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	Core Recovery	Oxide	Quartz	Sericite	Clay Prop	Biotite	K-spar	Chlorite	Epidote	Carb-Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac Inten	Est. Cu. Mo					CuFeS ₂	FeS ₂	CuFeS ₂	Fe ₂ O ₃	MoS ₂		
18																											648091	<p>along fracture sfcs where py(?) has been weathered - out. Moderately broken core with poor recovery below 14.33m; tough drilling conditions.</p>		
20																											648092	<p>late bc band with coarser clasts various lithologies including silica.</p>		
22																											648093	<p>irreg py vlt 1-4 mm wide @ 55°</p>		
24																											648094	<p>off-white clay clots to 15 mm across say 10% rock volume.</p>		
26																														
28																												<p>km fault; 4 cm f. bkn core + clay; ? orientation.</p>		
30																												<p>fault; 25 cm mod → f. bkn core; ? orientation.</p>		

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Footage	Core Recovery	Oxide	ALTERATION													STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE _____ BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT	
			Pyrope	Biotite	K-spar	Chlorite	Epidote	Carb./Zeo	Garnet	Pyroxene	Amphibole	Albite	S.C.C.	Sulf. Veins	Frac. Inten		Est. Cu. Mo	CuFe ₂ S ₄	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃					MoS ₂
30																						678095				
32																										
34																						678096				
36																										
38																						678097				
40																						678098				
42																										

fault; 40 cm soft, intensely clay-althd,
 crushed rock; $\approx 60^\circ$
 irreg, wispy, hairline py. vltz.; pale aqua sericite?
 fault; 5 mm clay gouge + f. bkn on slip $\approx 54^\circ$
 fault; 20 mm clay gouge + f. bkn; ? orientation.
 finely diss mag.
 py vlt 4mm $\approx 5^\circ$ to c.a.
 bleached pale brown \rightarrow pale orange brown.
 fault?; 3 cm crushed, f. bkn core; ? orientation.

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	Core Recovery	Oxide	Quartz	Sericite	Clay	Biotite	K-spar	Chlorite	Epidote	Carb./Zeo		Garnet	Pyroxene	Amphibole	Albite	S.C.C.					Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MeS ₂	hem
54																										648103	mag-chl dots possible QFP. fault, 30 cm clayey gouge + f. bkn core @ 33° to c.a. py vlt 3mm subparallel c.a. lensoid q.v.'s to 1-2 cm wide @ 55°	48.75 - 56.17 ANDESITE PORPHYRY. Steel grey, medium grained, fresh and relatively unaltered. Subhedral, watery grey plagioclase laths to 2 mm long in v.f. gr. to aphanitic matrix. Traces to 0.5% finely diss mag throughout. Traces hem as faint, irregular vlt's to 2 mm across, often @ 35° to c.a. Local traces chl, except for lowermost 2 m of interval where rock spotted with chl-mag clots 3 to 4 mm across. This lower interval has faint granitic texture - poss. alt'd QFP??	ANDESITE PORPHYRY.
56																										648104	py (80%) - qtz (20%) vlt 5 mm wide @ 10°	56.17 - 76.48 ALTERED ANDESITE LAPILLI TUFF. Light grey-brown to pale creamy brown with say av. 10% lapilli-size clasts mostly 7 to 25 mm across. Moderate pyrophyllite alt'n, local wk to intensely silicified wk clay mineral alt'n with occ. off-white clots to 3 cm across. Rock unit somewhat bleached in appearance to 73.90 m. below 73.90 m gradual increase in chl + mag content approaching intrusive contact with underlying QFP dyke.	ALTERED ANDESITE LAPILLI TUFF.
58																										648105	wkly brecciated. ep speck with interval with f. diss maroon hematite.		
60																										648106	prob. healed fault @ 25°; 20 cm mod bkn core. py vlt 2 mm @ 75°		
62																													
64																													
66																													

mainly pyrophyllite alt'n

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	Core Recovery	Oxide	Quartz	Sericite	Clay/Py	Biotite	K-spar	Chlorite	Epidote	Carb-Zeo	Garnet	Pyroxene		Amphibole	Abite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂
90																									678115	+ fault; 13 mm clayey gouge on fract. @ 65° + ep specks to ~0.75 mm w. py in late bx band. + fault; 20 cm mod bkn, ? orientation. + late breccia with QFP clasts, pyritic matrix + fault; ? orientation	92.27-94.30 ANDESITE TUFF (?) Light greyish brown medium gr., locally faintly banded.	
92																									678116	+ f.g. late bx dyke w. pyritic matrix. + 30°; discrete contact	94.30-102.23 QFP Medium brown to light grey-brown; local white-brown patches w/ fine feldspar phenos sericitized. Medium grained with feldspars euhedral, blocky, av. 2 to 3 mm max 7 mm long. Qtz eyes faint, corroded.	
94																									678117	+ late bx band @ 20°; py matrix along ainds/QFP contact + pyroph(85%) - py(15%) vts 6 mm wide @ 21° + red hem along fracture @ 25° + py-hem-ep vts @ 20° + QFP spotted with 25% off-white sericitized feldspar phenos.	Py both f. diss and as vts up to 2 mm wide generally @ 30° to 45° to c.a. Core somewhat broken above 98.6 m depth. QFP alt'd with sericite + clays present; this rock can easily be scratched with a knife!	
96																									678118	+ py vts to 3 mm @ 40°		
98																												
100																												
102																												

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	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyro	Biotite	K-spar	Chlorite	Epidote	Carb/Zeol	Garnet	Pyroxene	Amphibole		Abite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu, Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂
102																									678119	faint contact @ about 25° fault; 2 cm gouge + f. bkn core @ 40° irreg py vlt's to 4 mm wide. yellow sulphides. qv 23 mm @ 30° w. py speckles py	102.23 - 125.36 ANDESITE TUFF (?) 65% QFP 35% Light brownish grey to light brown medium grained rock. QFP as irregular patches with faint boundaries, and also as more discrete dykes in which feldspare phenos are moderately sericitized + off-white. In most of interval grey and difficult to discern. Interval soft, easily scratched by knife in most places. In most of interval difficult to determine whether rock tuff or QFP as original texture + mineralogy masked by alt'n; interval may be mostly QFP. Lower contact faint at about 40°.	
104																									678120	qv w. py 6 mm @ 30° + bn speckles. QFP dyke @ 27°.		
106																									678121	fault; 30 cm bkn; ? orientation py vlt 1mm @ 25° py pyrophyllite vlt 6 mm @ 30° crosscuts py vlt's. yellowish sulphide.		
108																									678122	pervasively silicified, grey; hard.		
110																												
112																												
114																												

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	Core Recovery	Oxide	Quartz	Sericite	Blotite	K-spar	Chlorite	Epidote	Carb. Zeo	Garnet	Pyroxene	Amphibole	Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄					Fe ₃ O ₄	MoS ₂	hem	
119																									678123	<p>fault, 10 cm mod kn along pyritic fracture @ 38°</p>	<p>ANDS TUFF (?) 65%, QFP 35% continued</p>	
116																									678124	<p>small bn specks + late bx band @ 25°; coarse clasts to 18 mm.</p>	<p>125.36 - 126.73 QFP Pale brownish grey, medium grained, with blocky euhedral white feldspar phenos av. 2.5 mm in a relatively hard, aphanitic matrix. Feldspars less sericitized than in QFP seen higher in hole + matrix less altered as well.</p>	
118																									678125	<p>qtz in to 4 mm subparallel c.a. late bx band 10 cm wide @ ~30°; coarse clasts to 8 mm across.</p>		
120																									678126	<p>irreg, off-white to cream qtz (?) vns to 25 mm wide</p>		
122																									678127	<p>fault, 30 mm f. kn, soft, crushed @ ~60°</p>		
124																									678128	<p>py vts to 2 mm</p>		
126																									678129	<p>fault contact @ ~40°</p>	<p>red hem (after py (?)) as stain envelope along py vts.</p>	

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	Core Recovery	Oxide	Quartz	Sericite	Clay (mp)	Biotite	K-spar	Chlorite	Epidote	Carb./Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂	len
126																										678127	+ qtz-py-cp? - mo vlt 2 mm subparallel c.a. invasive contact @ 34° 3 mm py vlt along contact irreg. randomly oriented py vltts to 3 mm wide.	126.73 - 146.58 ANDESITE PORPHYRY (40%) QFP (60%) "HYBRID" rock. Light brown to light grey, medium grained with feldspar phenos up to 5 mm. Original texture and composition of rock somewhat masked by later alt'n. QFP occurs as narrow bands and patches 10 to 15 cm wide with faint boundaries. It is difficult to determine how much of the interval is QFP vs. ANDS PORPHYRY. Much of the interval is faintly banded on a 2 to 10 cm scale. Rock fairly hard, pervasively silicified (? albitized). Feldspar say 35%, quartz 50%, pyrophyllite 5%, clays 2%, sericite 1-2%, pyrite 2%. Banding mainly @ 53° to 63° to c.a.; this "banding" may be due to the intrusion of numerous dykelets of QFP at about the same orientation. orange limst traces throughout gives rock pervasive light brown stain in most sections.	
128																										678128			
130																										678129	+ late bx band @ ~40° pyritic matrix, conch clasts to 7 mm, mod. bkn core? yellowish sulphide - cp?		
132																										678130	+ late bx vn 25 mm @ 35° w. 5% diss py in matrix.		
134																													
136																											+ watery grey feldspar phenos, euhedral, blocky to 2x5 mm		
138																													

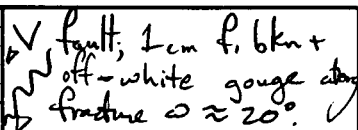
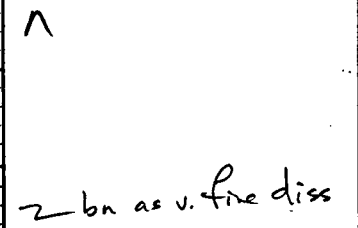
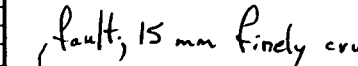
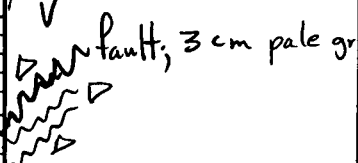
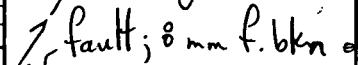
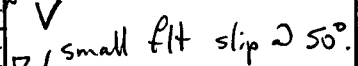
HOLE NO. EC 212

DRILL LOG

Page 14 of 17

PROJECT Expo Olympic
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 204.83 m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION													STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT					
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Blattite	K-spar	Chlorite	Epidote	Carb. Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu, Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂	
162																										648139	 <p>fault; 1 cm f. bkn + off-white gouge along fracture @ $\approx 20^\circ$</p>	146.58 - 174.35 ANDESITE PORPHYRY(?) continued	
164																										648140	 <p>2 cm as v. fine diss specks</p>		
166																										648141	 <p>fault; 15 mm finely crushed along slip @ $\approx 25^\circ$</p>		
168																										648142	 <p>fault; 3 cm pale grey gouge + f. bkn @ 60°</p>		
170																										648143	 <p>fault; 8 mm f. bkn on slip @ 33°</p>		
172																										648144	 <p>small f. bkn slip @ 50°</p>		
174																													

PROJECT Expo
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 204.83m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION												STR.	VISUAL EST.					Sample No. & Interval	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT								
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb-Zeo	Garnet	Pyroxene		Amphibole	Abite	S.C.C.	Sulf. Veins	Frac. Inten				Est. Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂		
150																										648135	✓	146.58-174.35 ANDESITE PORPHYRY(?) continued	
152																										648136	✓	py vlt's to 1.5 mm @ ~40°	
154																										648137	✓	fault; 38 cm mod bkn core; 3 mm pale grey gouge slip @ 40° @ top of ft interval.	
156																										648138	✓	py band 8 mm @ 30° late bx; pyritic matrix 5 ft; 20cm mod → f. bkn core	
158																										648138	✓	smokey grey pyrophyllite vlt 3 mm @ 60° to c.a. py as subround blebs to 3mm often with bn(?) rims. pyritic slip @ 15°	
160																													
162																													

PROJECT Expo
CONTRACTOR Olympic
DATE STARTED _____ COMPLETED _____
LOGGED BY DJP

T.D. 204.83 m COLLAR ELEVATION _____
INCLINATION _____ BEARING _____
COORDINATES _____
SURVEY REFERENCES _____

Footage	Core Recovery	Oxide	ALTERATION										STR.			VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2 m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT			
			Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeol	Garnet	Pyroxene	Amphibole	Abite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂					Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂
198																								678151		174.35-204.83 ANDS TUFF(?)	
200																								678152		fault; 12 cm crushed @ about 65° yellow sulphide (cp?) as wispy, hair-line vltts to 5 or 8 mm long with pyrite.	
202																										fault; 5 cm white clayey gouge + f. bkn core @ 55° core soft, crushed, generally moderately broken.	
204																										fault; 40 cm of soft, clayey gouge and finely bkn core along slips @ about 50° Occ. bands sooty pyritic clay to 2 or 3 mm wide within fault zone.	
																										fault; 30 cm crushed, f. bkn core.	
																										204.83 m END OF HOLE	

PROJECT Expo
 CONTRACTOR Olympic Drilling
 DATE STARTED March 23/94 COMPLETED March 27/94
 LOGGED BY David J. Pawliuk

T.D. 129.84 m COLLAR ELEVATION 2215' ±
 INCLINATION -90° BEARING _____
 COORDINATES _____
 SURVEY REFERENCES 233117 E / 243528 N ±

Footage m	ALTERATION											STR.		VISUAL EST.					Sample No. & Interval	LOG SCALE 1" = 2m BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT							
	Core Recovery	Oxide	Quartz	Sericite	Clay Prop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeol	Garnet	Pyroxene	Amphibole	Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo					CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂	Len	
<p><u>NQ core throughout; 30 ft casing left in hole; no acid test</u></p>																													
12																										648153	<p>core generally moderately broken from 12.19m to 25.91m depth; poor core recovery.</p>	<p>0.00 - 12.19m CASING 12.19 - 31.91m CLAYEY SILICEOUS BRECCIA. Pale pinkish cream to light yellow brown to watery grey in colour. Mostly fine grained rock with granular or clastic texture. Pinkish cream to off-white clay occurs mainly as irregular cusped masses av. size 12 to 25 mm across; clay also within bands up to 15 or 25 cm wide. Clays soft, can be scratched with fingernail. No pyrophyllite seen. Clays say 45% rock volume, watery grey silica 52%, yellow brown to red brown limonite 3%. Occ. bkn, deformed watery grey qtz vts to 10 mm wide less than 0.5% rock volume. Irregular seams (vts?) of off-white clay mineral locally cross-cut pinkish clay masses. Limonite as pervasive stain and lining fracture sites throughout. No sulphides seen.</p>	
14																										648154	<p>fault?; 4 mm f. bkn core. q.v. 10 mm @ 47°</p>		
16																										648155	<p>late bx band w. subangular clasts to 27x12 mm in light brown, f. gr. "guke" matrix; ?? orientation.</p>		
18																													
20																													
22																													
24																													

see separate sheet

PROJECT Expo
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 129.84 m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION										STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2 m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT											
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeol		Garnet	Pyroxene	Amphibole	Albite	S.C.C.					Sulf. Veins	Frac. Inten	Est. Cu, Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂			
36																															
38																															
40																															
42																															
44																															
46																															
48																															

648160

X cutting qtz vltts
 4mm wide @
 ≈ 40°

648161

poss. cp speck

648162

fault, 35mm fltkn
 + clayey gouge @
 65°

648163

35.23 - 80.80
 CLAYEY SILICEOUS
 BRECCIA As for
 12.19 - 31.91 above,
 except here 1 to 2%
 watery grey qtz vltts to
 6mm wide, often with
 faint boundaries. Py here
 av. say 1%, locally 5%
 across 0.2 m. Clays say
 30%, silica 66%, limonite
 3%, py 1%. Generally
 moderately broken core with
 poor recovery.
 Clay dots below 40.5 m
 depth av. ≈ 6 mm across.

PROJECT Expo
 CONTRACTOR Olympic
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. 129.84m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION													STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT					
	Core Recovery	Oxide	Quartz	Sericite	Clay (Py)	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet	Pyroxene	Amphibole		Abite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo					CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂
96																									648180	q.v. 15 mm $\approx 30^\circ$ q.v. 5 mm $\approx 55^\circ$ q.v. 6 mm $\approx 30^\circ$ large pyrophyllite qtz vlt xcuts pyroph clot.	80.80-117.30 SILICEOUS PYROPHYLLITE BRECCIA continued.	
98																									648181	q.v. 45 mm $\approx 80^\circ$ wormy, sinuous qtz vlt. brownish + greenish pyrophyllite clots.		
100																									648182	q.v. 75 mm $\approx 60^\circ$ bn diss along margins. q.v. 8 mm $\approx 30^\circ$ blk, irreg qtz vlt.		
102																									648183	dusty diss bn (?) within irreg. qtz vlt 4 mm wide $\approx 25^\circ$ cavities to few mm. ?flt. limt-stained bn band $\approx 45^\circ$, 60 mm wide. q.v. 25 mm $\approx 60^\circ$ waxy pyroph vlt. to 2 mm. white clay (?) rims on pyroph masses. py mainly blebs in pyroph masses.		
104																												
106																												
108																												

PROJECT Expo
 CONTRACTOR Olympic
 DATE STARTED March 23/94 COMPLETED March 27/94
 LOGGED BY DJP

T.D. 129.84m COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION											STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT						
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet		Pyroxene	Amphibole	Albite	S.C.C.	Sulf. Veins					Frac. Inten	Est. Cu. Mo	Cu/Fe ₂	Fe ₂	Cu/FeS ₂	Fe ₃ O ₄
120																											
122																											
124																											
126																											
128																											
129																											
130																											

117.30 - 129.84
 ALTERED VOLCANIC BRECCIA? continued
 Rock say 40% vlt gtz, 50% off-white kaolinitic clays, 5 to 9% diss py, traces lmt and sericite.
 Py locally as subhedral xtals to 1mm across.
 Core moderately broken below 125 m depth.

q.v. 10mm $\omega \approx 10^\circ$

q.v.'s 4 to 7 mm $\omega \approx 45^\circ$ to c.a.

fault, ≈ 10 mm clayey gouge, on fract. $\omega \approx 60^\circ$

bn speckles to 1mm across.

fault, 70 mm crushed, soft core between fractures $\omega \approx 65^\circ$

py-rich (70%) band 30 mm wide.

129.84 m END OF HOLE

PROJECT Expo
 CONTRACTOR Olympic
 DATE STARTED March 28/94 COMPLETED April 5/94
 LOGGED BY David J. Pawliuk

T.D. 365.76 m COLLAR ELEVATION 1580' ±
 INCLINATION -90° BEARING —
 COORDINATES —
 SURVEY REFERENCES 244830 N / 234775 E ±

Footage (m)	ALTERATION													STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2 m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT				
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyro	Biotite	K-spar	Chlorite	Epidote	Carb-Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten.	Est. Cu. Mo					CuFeS ₂	FeS ₂	CuFeS ₂	Fe ₂ O ₃
<u>NQ core throughout; casing pulled; acid test @ 365.76 m - 83°</u>																											
12																										0.00 - 15.24 CASING	
14																										15.24 - 17.35 LATE BRECCIA Medium grey-brown, coarse grained with larger clasts angular, about 80% rock volume at pay 4 cm across. Clasts up to 7 cm across. Clast lithology about 60% as for underlying rock unit (alt and porphyry) and 40% other lithologies (silica, off-white kaolinite, QFP). Matrix fine sandy material with py both v. f. diss and as masses to 2 mm across. Occ. trace bluish bn? Lower contact discrete @ 30°; may be healed fault.	
16																										17.35 - 42.23 ALTERED ANDESITE PORPHYRY? (POSSIBLE) QUARTZ-FELDSPAR PORPHYRY) Light greyish brown, competent with aphanitic matrix. Coarse to medium grained rock with spots of off-white sericite after feldspar(?) and light brown waxy pyrophyllite(?).	
18																											
20																											
22																											
24																											

see separate sheet

648190
 30° contact, poss. healed fault.
 bkn pieces on qtz in cream coloured silicified clay matrix.

648191
 spotty py along vlt 1 mm wide @ 45°.

648192
 pyrophyllite (90%) - py (10%) vlt 3 mm @ 10°.
 fault 15 cm crushed, soft, 1/2 bkn core on fracture @ 27°.

PROJECT Expo
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. _____ COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION													STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT							
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFe ₂ S ₄					FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂			
60																											648205	✓			
62																												648206	^	on bn rim on ep speck 0.5 mm across.	
64																												648207	✓	py vts 2 to 10 mm wide ∞ 55° to c.a.	
66																												648208	^	py vlt on fracture ∞ ≈ 25°	
68																															
70																															
72																															

45.80
 ALTD ANDS PORPHYRY
 (?QFP?) continued

PROJECT Expo
 CONTRACTOR _____
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T.D. _____ COLLAR ELEVATION _____
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 COORDINATES _____
 SURVEY REFERENCES _____

Footage	Core Recovery	Oxide	ALTERATION										STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS, NOTES & SKETCHES	ROCK UNIT							
			Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet	Pyroxene		Amphibole	Ablite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo					CuFeS ₂	FeS ₂	CuFeS	Fe ₃ O ₄	MoS ₂	hem	
72																										678209	✓			
74																											678210	↑		
76																											678211	↘		
78																											678212	↙		
80																														
82																														
84																														

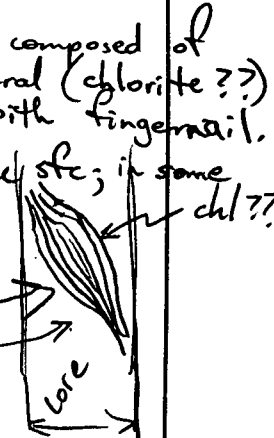
75.80 - 76.50
 ALT'D ANDS PORPHYRY?
 (QFP?) continued

2 up mass 0.5x2mm
 rimmed by br

↑
 + euhedral white
 sericitized feldspar
 + laths; likely QFP
 patch. Laths to
 4 mm long x 2
 mm wide.
 + wispy py vths 2mm
 @ 60°

moderately broken
 core; poor
 recovery.

↘
 hairline, curved
 laminae on fracture stc; laminae composed of
 soft, dk green to brownish mineral (chlorite??)
 hem which can easily be removed with fingernail.
 Odd mode of occurrence.
 ↙
 Mineral v. thin coating on fracture stc; in some
 places laminae are discontinuous.
 QFP dyke 10 cm @ 40°.



↙
 laminae on fracture
 coated with pyrophyllite
 vth 2 to 3 mm wide.
 ↘
 pyrophyllite mass 2cm
 across

76.50 - 77.25 QFP DYKE
 Pale brown to med. grey, med. gr.
 w. sericitized feldspar laths + blacky
 phenos to 2.5x5 mm. Py content
 varies from trace → local 2%.

PROJECT Expo
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. _____ COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION											STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT									
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet		Pyroxene	Amphibole	Abite	S.C.C.	Sulf. Veins					Frac. Inten	Est. Cu. Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂		
108																										648221	+		81.50 - 118.72 QFP DYKE continued.	
110																										648222	+		118.72 - 119.33 Late breccia dyke. Medium brownish grey, 80% subangular clasts to 30 mm, 20% sandy, pyritic matrix. Coarse clasts mainly QFP with few silica and also pyrite clasts as well. Upper and lower contacts @ 55°	
112																										648223	+		119.33 - QFP DYKE Astor 81.50 - 118.72 above.	
114																										648224	+			
116																														
118																														
120																														

fault. 10 mm creamy white
clayey gouge + f. bkn @
60°

mod. brecciated;
lmt along fractures.

weakly brecciated w.
lmt coating fractures

pale brown biotite??
flakes appear

dusty bn? in euhedral
qtz eye 5 mm across.

fault. 20 mm light
orange (lmt) sandy gouge + f. bkn along fracture @ 220°

discontinuous, wispy
bn vlt @ 40°

mod. brecciated;
healed w. lmt
along fractures.

55°
late breccia band

PROJECT Expo
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. _____ COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
 SURVEY REFERENCES _____

Footage	ALTERATION											STR.	VISUAL EST.					Sample No. & Interval	LOG SCALE <u>1"=2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT							
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biomite	K-spar	Chlorite	Epidote	Carb/Zeol	Garnet		Pyroxene	Amphibole	Abite	S.C.C.	Sulf. Veins					Frac. Inter	Est. Cu, Mo	CuFeS ₂	FeS ₂	Cu ₂ FeS ₄	Fe ₂ O ₃	MoS ₂
120																									648225	<p>fault, 18mm f. bkn + gouge 260°</p> <p>mainly moderately broken core</p>	<p>119.33 - 131.82 QFP Dyke as for 81.50 - 118.72 above.</p>	
122																									648226	<p>late bx band 4cm 280° w. pyritic matrix</p> <p>late bx band w. sandy + pyritic matrix; cp speck 1.5x0.5mm.</p>		
124																									648227	<p>fault; 20mm crushed f. bkn core + gouge.</p> <p>late bx band 30cm wide w. pyritic matrix. Occ. bn f. diss; a few small cp speck w. bn rim.</p>	<p>131.82 - SILICEOUS PYROPHYLLITE TUFF? Light brown-grey, medium grained with sneaky grey pyrophyllite clots 2 to 5 mm across within silicified matrix. Rock has faint granular or clastic texture. Silica content gradually decreases with depth, pyrophyllite increases.</p>	
126																									648228	<p>Faults: 30cm off-white, clayey gouge + f. bkn core on slip 212°</p>	<p>Green chlorite content also increases with depth. Core moderately broken with numerous faults, bad ground; caved material recovered above 133.81m, 136.09, 136.25m depth.</p>	
130																												
132																												

PROJECT _____
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
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T.D. _____ COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
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Footage	ALTERATION													STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT					
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeol	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂	hem
144																										648233	brecciated w. pyritic matrix. fault, 30 mm f. bkn + gouge? ? orientation. fault, 2 cm off white gouge + f. bkn @ 45°	131.82 - PYROPHYLLITE - ALTD TUFF(?) continued.	
146																										648234	fault, 5 cm crushed @ 35° fault, ? orientation red hem spots to few mm across. steel grey mag spots to few mm. chl appears aqua sericite spots moderately br'd		
148																										648235	fault, 10 mm gouge + f. bkn; ? orientation. hem selvages		
150																										648236	vein of light greenish grey v. f. gr. aplite 2 cm wide @ 40° intrudes tuff and is in turn cut by waxy grey pyrophyllite vlt's to 2 mm. red hem spots to few mm, as irreg. vlt's to 2 mm wide fault, 5 mm pale grey gouge or fracture @ 25° fault, 20 cm crushed, f. bkn @ 50° to c.a.		
152																													
154																													
156																													

PROJECT _____
 CONTRACTOR _____
 DATE STARTED _____ COMPLETED _____
 LOGGED BY DJP

T.D. _____ COLLAR ELEVATION _____
 INCLINATION _____ BEARING _____
 COORDINATES _____
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Footage	ALTERATION													STR.	VISUAL EST.						Sample No. & Interval	LOG SCALE <u>1" = 2m</u> BASIC GEOLOGY: rock types, metallization, structures alterations, one column system	LITHOLOGIC DESCRIPTIONS. NOTES & SKETCHES	ROCK UNIT					
	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb/Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	Cu ₂ FeS ₄	Fe ₃ O ₄	MoS ₂	Iron
168																											✓ qtz vlt 5 mm @ 15°	158.30 - PYROPHYLLITE TUFF (?)	
170																											fault; 4 mm f. bkn + gouge @ 20° pyrop vlt mag w. hem in subground masses to 10 or 12 mm across w. rare v. fine specks of cp + py.		
172																											fault; 10 cm f. bkn + gouge @ 55° fault; 2 cm gouge + f. bkn on slip @ 30° fault; pyritic slip @ 65° w. slicks. green chl rims on hem clots.		
174																											fault; 30 cm mod → f. bkn, ? orientation. fault; 20 mm crushed on fract. @ 40° hem selvages (after mag ?) along pale grey qtz vlt's, lenses approx. subparallel etc.		
176																											fault; 10 cm f. bkn; ? orientation. mag-rich band 10 mm wide @ 50°		
178																											fault; clayey slip @ 60° qtz vlt 8 mm @ 22° w. mag selvages.		
180																											fault; clayey slip @ 35° fault; 20 mm crushed, @ 70° irreg mag vlt's to 2 mm. mag vlt's along hairline fractures.		

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216																										678257	<p>bn v. f. diss. py vlt. 2.5 mm @ 10°</p>	<p>207.45 - 219.10 QFP continued, Fault contact with underlying unit.</p>	
218																										678258	<p>fault, 20 cm fibkn core + white gouge @ ≈ 55° pyritic band 4 mm @ 40° py band 10 mm @ 20°</p>	<p>219.10 - SILICEOUS TUFF? Medium brownish grey, mottled, med. → fine gr., massive rock. More pyritic bands to 10 or 12 mm wide than seen higher in hole.</p>	
220																										678259	<p>fault, 1 mm sooty py-rich gouge on slip @ 50° fault, 1 mm grey sooty py-rich gouge @ 30° subparallel py vlt's py 5 mm ep vlt to 1mm wide</p>	<p>Somewhat bkn core throughout. Local patches of weak to moderate pyrophyllite - alt'd rock which can easily be scratched with knife. Remnants of unit hard; perv. silica.</p>	
222																										678260	<p>QFP dyke as for 207.45 - 219.10. fault, 10 cm f. bkn + gouge; ? orientation.</p>		
224																											<p>waxy grey pyrophyllite vlt's along fracture sfcs.</p>		
226																													
228																													

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228																									648261	<p>219.10 - 236.83 SILICEOUS TUFF? continued. Gradually increasing pyrophyllite content below 229.0 m depth; rock can be scratched here + there with a knife. Unit still mostly moderately broken with ground core; poor recovery. Contact with underlying unit probably small slip @ 8.7°; a little core was ground at 236.83 footage block (end of run) so not sure of contact.</p>	
230																									648262	<p>fault; 20 cm mod. f. bkn; ? orientation.</p>	
232																									648263	<p>fault; 5 cm f. bkn; ? orientation. 40% f. diss py over 7 cm. fault; pyritic slip @ 65°</p>	
234																									648264	<p>fault; 10 mm gouge + f. bkn @ 36° few spots aqua sericit(?) fault; 4 mm @ 50°</p>	
236																										<p>qtz vlt 5 mm @ 65° fault; crushed zone 20 mm @ 20°</p>	
238																										<p>fault; 5 cm clayey gouge + f. bkn @ 60°</p>	
240																											

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240																										648265	+		239.70-241.28 QFP as above. 241.28-242.71 CHLORITIC ANDS TUFF? continued. Fault contact with underlying QFP @ 40°	
242																										648265	+	qtz eyes to 6 mm.	242.71 - 269.48 QFP	
244																										648266	+	fault; 17 cm crushed f. bkn + gouge @ 40° qtz vlt 4 mm @ 70° yellow clays. qtz vlt 5 mm @ 80°	Light greenish grey to reddish green (where dusty) diss hematite within matrix; this in patches throughout up to 1 or 2 m across. Local medium green sections below	
246																										648267	+	fault; 4 cm f. bkn @ about 50° fault; slip @ 250°	269.0 m depth; increase in chlorite content with depth. QFP generally medium grained with subhedral greyish white qtz eyes to 7 mm spotting units. Feldspar phenos altd to white sericite then locally silicified or altd to pyrophyllite ??	
248																										648268	+	py band 5 mm wide along clayey flt @ 30° fault; 4 mm gouge @ 60° fault; 3 mm gouge @ 15° fault slip @ 20°	QFP mineralized w. say 1% py, often soft, crushed zones to 30 or 50 cm wide throughout. Rock can nearly everywhere be scratched with knife. Definitely not typical QFP.	
250																										648268	+	fault; 5 cm f. crushed at 58° fault; 5 cm f. crushed @ 20°; 20 mm py mass poss. dragged along flt.	(continued)	
252																														

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	Core Recovery	Oxide	Quartz	Sericite	Clay/Pyrop	Biotite	K-spar	Chlorite	Epidote	Carb:Zeo	Garnet	Pyroxene	Amphibole		Albite	S.C.C.	Sulf. Veins	Frac. Inten	Est. Cu. Mo	CuFeS ₂					FeS ₂	CuFeS ₂	Fe ₂ O ₃	MoS ₂
264																									648273	<p>op speckles along chloritic fracture</p> <p>fault; 30 mm gouge + f. bkn @ 55°</p> <p>fault; 15 mm gouge + f. bkn @ 45°</p> <p>qtz vlt 6 mm @ 25° w, hairline py vlt parallel qtz vlt margins.</p> <p>qtz vlt to 4 mm @ 20° xcut earlier vlt @ vein qtz frags (x xenos) to 8 mm x 4 mm.</p> <p>fault; 4 mm gouge + f. bkn @ 50°</p> <p>fault; 5 cm f. bkn + clayey gouge @ 50° w. pyritic bands few mm wide along margins.</p> <p>fault; clayey slip @ 55°</p> <p>op speckles in mag clots added to sericitic (agass).</p> <p>qtz vlt to 1.5 mm QFP (?)</p> <p>op specks in irregular mag vlt to 1 mm wide.</p> <p>qtz vlt 4 mm @ 35°</p> <p>fault; 3 mm sooty py + clayey gouge @ 60°</p> <p>qtz vlt 5 mm @ 35°</p> <p>f. diss op in chl. clots.</p> <p>fault; 30 mm f. bkn + gouge @ 40°</p>	<p>242.71 - 269.48</p> <p>QFP(?) continued Gradational contact with underlying volcanic; say 2% qtz eyes within volcanic but rock more chloritic and sericitized feldspar phenos rare or absent.</p> <p>269.48 - 276.85</p> <p>ANDESITE TUFF (?)</p> <p>Medium to dark greyish green to medium brownish green with greenish black mag-chl clots 5 to 10% rock volume av. 5 to 10 mm across. Rock moderately magnetic. Qtz eyes decrease in abundance with increasing depth. Less f. diss red-orange here than in overlying QFP. About 2/3rds of mag-chl clots have sharply defined margins. clots are occasionally cusped + look to have been partly replaced by soft pyrophyllitic (?) matrix minerals. Tuff (?) medium to locally coarse grained, massive no banding seen. Rock often similar in appearance to QFP.</p>	
266																									648274			
268																									648275			
270																									648276			
272																												
274																												
276																												

qtz vlt to 3 mm parallel c.a.

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288																										648281	fault; 2 mm gouge + f. bkn $\omega \approx 40^\circ$. qtz vlt 5 mm $\omega 80^\circ$. pyrrhotite - coloured + metal from drill bit(?) on core sfc. diss py band 4 mm $\omega 35^\circ$.	276.85 - 304.11 QFP continued.	
290																										648282	fault; 40 cm crushed, f. bkn + white gouge ω 55° to core axis. mag vlt 1 mm $\omega 20^\circ$. py vlt 2 mm $\omega 78^\circ$ ep v. fine in mag clots. qtz-py vlt 2 mm $\omega 40^\circ$	289.40 - 291.65 Bleached pale orangey grey interval; harder and silicified with only faint white remnants of sericite - altered feldspar phenos. Most of these phenos replaced by the later silica. Bleaching + silicification due to silica entering rock via fault; underlying zone of bleaching.	
292																										648283	qtz "v" or silicified band 5 mm wide in centre; $\omega 45^\circ$.		
294																										648284	fault; 10 mm grey gouge + f. bkn $\omega \approx 40^\circ$. - bleached selvages 3 mm wide along 1 mm py vlt $\omega 35^\circ$. py vlt 4 mm $\omega 35^\circ$		
296																											v. xenos v. f. gr. volc (?) to 2 cm across.		
298																											fault; pyritic slip $\omega 65^\circ$		
300																													

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300																									648285	cp along + within rims of mag clots + fault; 5cm crushed @ 65° banded waxy grey qtz vlt 4 mm @ 60° py vlt to 1mm with bleached selvages 10 mm wide.	276.85 - 304.11 QFP continued	
302																									648286	+ fault; 20 mm f. bkn + grey gouge @ 55° qtz vlt 2 mm @ 60° py cubes to 1mm faint plag laths to 1 or 1.5 mm.	304.11 - 308.16 BASALT DYKE Chocolate brown, dark fine grained. Wkly magnetic. About 0.5 to 1% anygdules up to 6 or 8 mm (av. 1 mm) across throughout filled by calcite + qtz. Fresh, relatively unaltd rock. chilled margins at wall rock contacts. Lower contact @ 40°	
304																									648287	irreg white carb vlt to 10 mm. 40° 40° + fault; 5 mm f bkn + gouge @ 60°	308.16 - 308.70 QFP Light cream-grey, clay and sericite- altd, pyritic.	
306																									648288	fault; 8 cm f. bkn + gouge; ? orientation. carb vlt to 15mm	308.70 - 312.65 BASALT DYKE As for 304.11 - 308.16. Lower contact fault @ 30°	
308																												
310																												
312																												

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312																									648289	fault; 10 mm grey py-rich gouge, in contact, @ 30° br (?) dusty rims on py masses + vlt's. qtz 90% - py 10% vlt 15mm @ 45° w. bleached envelope 25 mm wide. enqtz-py vlt 7mm @ 25° dusty diss red hem.	308.70 - 312.65 BASALT DYKE cont. need. 312.65 - 317.27 QFP Light brownish grey to pale cream colored, medium grained rock. Bleached. Faint py and qtz veins + vlt's throughout mostly from 35° to 60°. Pyrite say 4%. Clay minerals yellow-cream colored.	
314																									648290	qtz vlt 3 mm along pyritic slip @ 40° qtz vlt 15 cm @ 70° waxy pyroch on fracture. qtz vlt 9 cm @ 60°		
316																									648291	carb vlt 3 mm along intrusive contact @ 46° red hem along contact. 30° qtz-py vlt 10mm @ 65° qtz vlt 15 mm @ 40°	317.27 - 317.10 BASALT DYKE As for 308.70 - 312.65, contact chilled, discrete, somewhat irregular @ 30°.	
318																									648292	fault, 10 mm crushed @ 60° fault, 10 cm f. bkn + gouge @ 55° heated bx with bkn qtz vlt's, vas throughout discrete contact @ 46°	319.10 - 323.36 QFP Light greyish brown to locally greenish grey, medium grained, altered rock. Unit moderately brecciated, heated bx, below fault @ 321.35 m depth. Chl within QFP mostly alt'd to cream colored sericite + clay.	
320																												
322																												
324																												308.70 - 312.65

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336																									648297	<p>contact 50°</p> <p>60 cm sandy gouge @ $\approx 40^\circ$?</p>	<p>335.30 - 336.33 RFP continued</p> <p>336.33 - 337.30 BASALT DYKE As above</p> <p>Lower contact major fault with 60 cm sandy gouge + f.bkn core, @ 40°?? to c.a. Late off-white calcite vltz to 6 or 7 mm wide within sandy gouge; vltz @ $\approx 45^\circ$.</p>	
338																									648298	<p>qtz vn 8 cm @ 60°</p> <p>abund. v. f. op. diss.</p> <p>qtz vn 12 mm @ 50°</p>		
340																									648299	<p>fault; 5 cm sand + f. bkn @ $\approx 50^\circ$</p> <p>qtz vns 15 mm @ 25°</p> <p>irreg py vlt 3 mm @ about 40°</p>		
342																									648300	<p>bkn qtz vltz.</p> <p>qtz vlt 6 mm @ 30°</p>		
344																												
346																												
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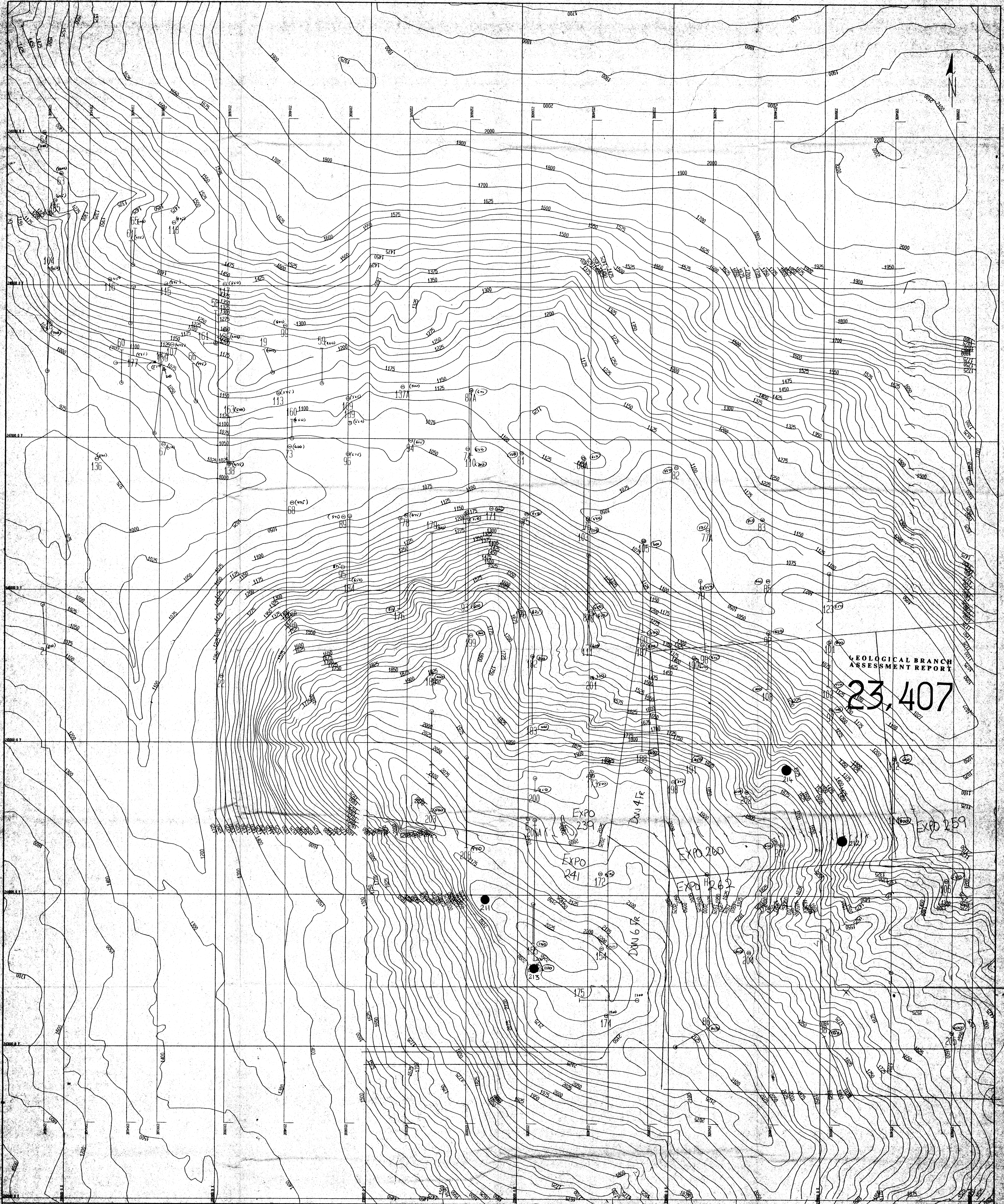
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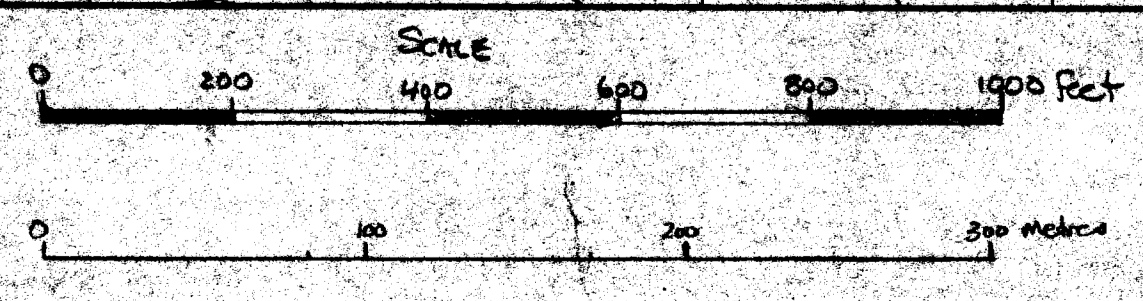
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348																											648301	+	qtz vn 20mm @ 50°	337.30-365.76 QFP As above	
350																											648301	+	qtz vn 20mm @ 65°	As above	
352																											648302	+	qtz vn 45mm @ 55° w.	As above	
354																											648303	+	qtz-py vn 20mm @ 65°	py bands to 3mm along margins.	
356																											648303	+	fault, 3cm f. crushed @ 60°		
358																											648304	+	qtz vn 20mm @ 20° w. mag selvages.		
360																											648304	+	fault, 18cm f. crushed @ 40°		
362																											648304	+	qtz vn 20mm @ 20°		
364																											648304	+	qtz vn 4cm @ 50°		
366																											648304	+	qtz vlt @ 70°		
368																											648304	+	qtz vn 4cm @ 50°		



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