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REPORT ON THE

EXPO DRILLING PROGRAM

HUSHAMU AREA

NORTHERN VANCOUVER ISLAND

BRITISH COLUMBIA, CANADA

NTS 92L/12

Latitude / 50°40' N

Longitude / 127°50' W

For

Moraga Resources Ltd.

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

By

E. Harrington, B.Sc.

August 15, 1989

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SUMMARY

Between November 11 and November 26, 1988, Tonto Drilling drilled five NQ wireline holes, EC-159-163, for a total of 762.7m (2502 ft). In total 306 split-core samples were assayed by Acme Analytical Laboratories Ltd., Vancouver, B.C.

The drill program substantiated the grade of the Hushamu deposit as indicated by BHP-Utah Mines Ltd.

No new bodies of gold or copper mineralization was indicated but further work in the area is warranted with the possibility of upgrading the tonnage at Hushamu to an economic level.

Between November 1, 1988 and December 22, 1988, Daiwan Engineering Ltd. conducted a regional mapping and sampling program over the entire Expo claim group. The Red Dog, McIntosh, and Hushamu claim groups were the target areas, a total of 125 rock samples were collected and assayed. A total of $62,918.77 was spent and was divided between the three claim groups.

A total of $128,483.35 was spent on the Hushamu Claim Group between November 1 and December 22, 1988.

INTRODUCTION

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

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

LOCATION AND ACCESS

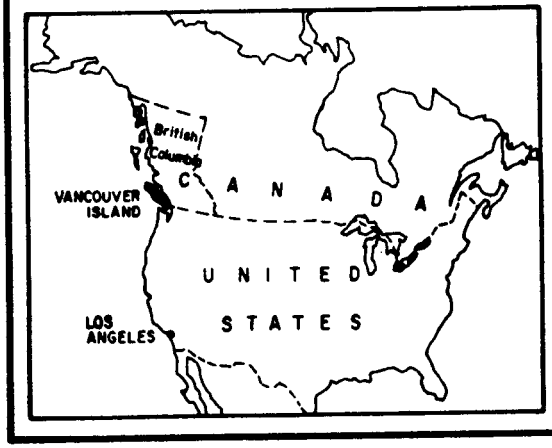
The Expo property is located on northern Vancouver Island, approximately 360 km (225 miles) northwest of Vancouver, British Columbia, Canada (Figure 1). Locally this large claim group covers a 20 km (13 mile) stretch of ground immediately north, and parallel to the west end of Holberg Inlet on N.T.S.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

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

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

TOPOGRAPHY AND VEGETATION

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



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EXPO PROJECT

NANAIMO MINING DIVISION, B.C.

LOCATION MAP

DAIWAN ENGINEERING LTD.

SCALE	DATE	FIG.
1:8,000,000	SEPT., 1989	1

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

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

PROPERTY DESCRIPTION

The Hushamu Group consists of 97 contiguous 2 post claims in the Nanaimo Mining Division. A complete list of the claims can be found in Appendix 1.

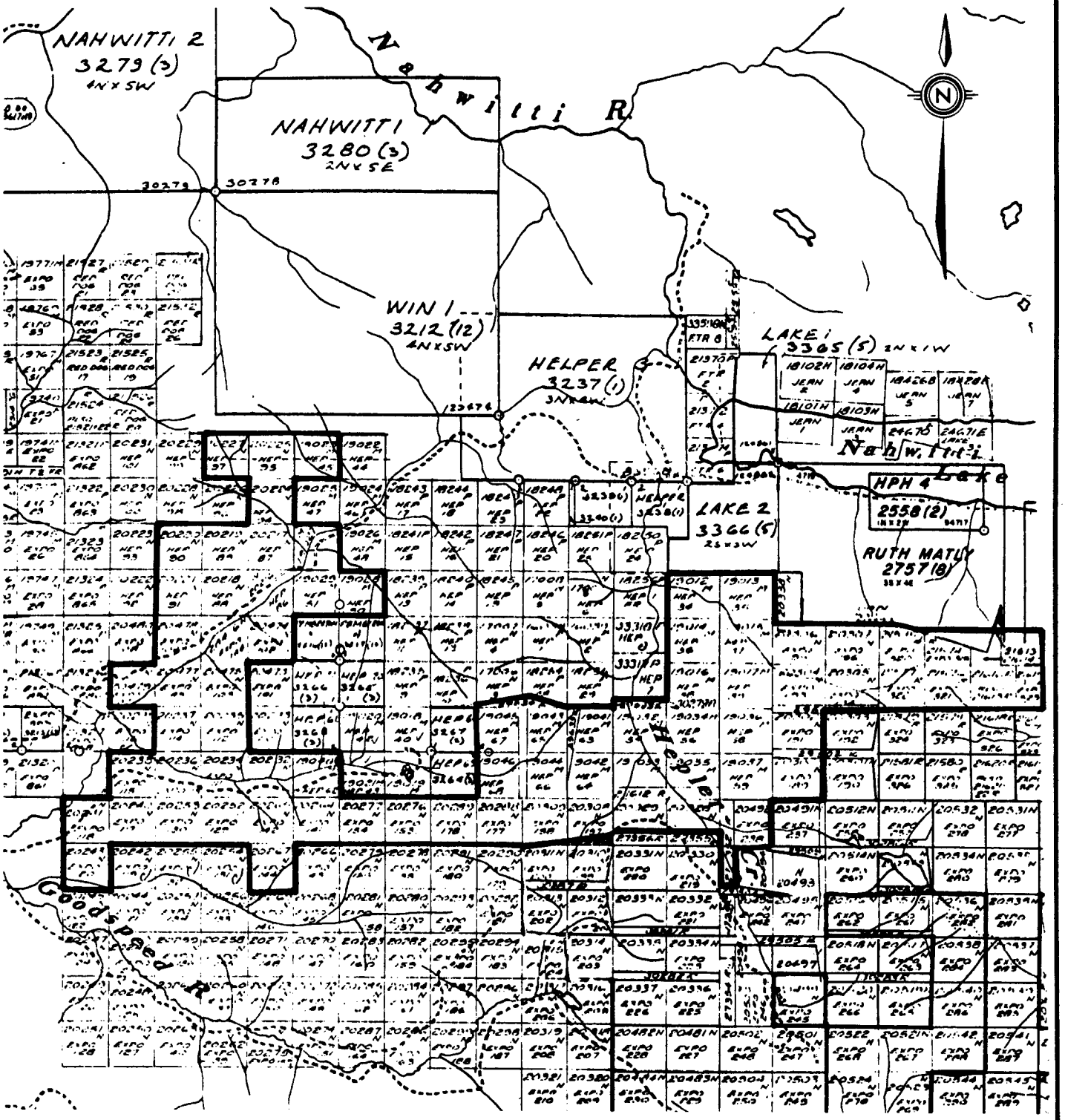
HISTORY

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

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

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

In 1963, the B.C. Department of Mines published the results of a recently completed aeromagnetic survey covering the northern end of Vancouver Island.[2] Since magnetite deposits were of interest at this time, considerable exploration activity was generated in the area examining all magnetic anomalies of interest.



MORAGA RESOURCES LTD.		
EXPO PROJECT NANAIMO MINING DIVISION, B.C.		
HUSHAMU AREA **CLAIM MAP**		
DAIWAN ENGINEERING LTD.		
SCALE 1 : 50,000	DATE SEPT., 1989	FIG. 2

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

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

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

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

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

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

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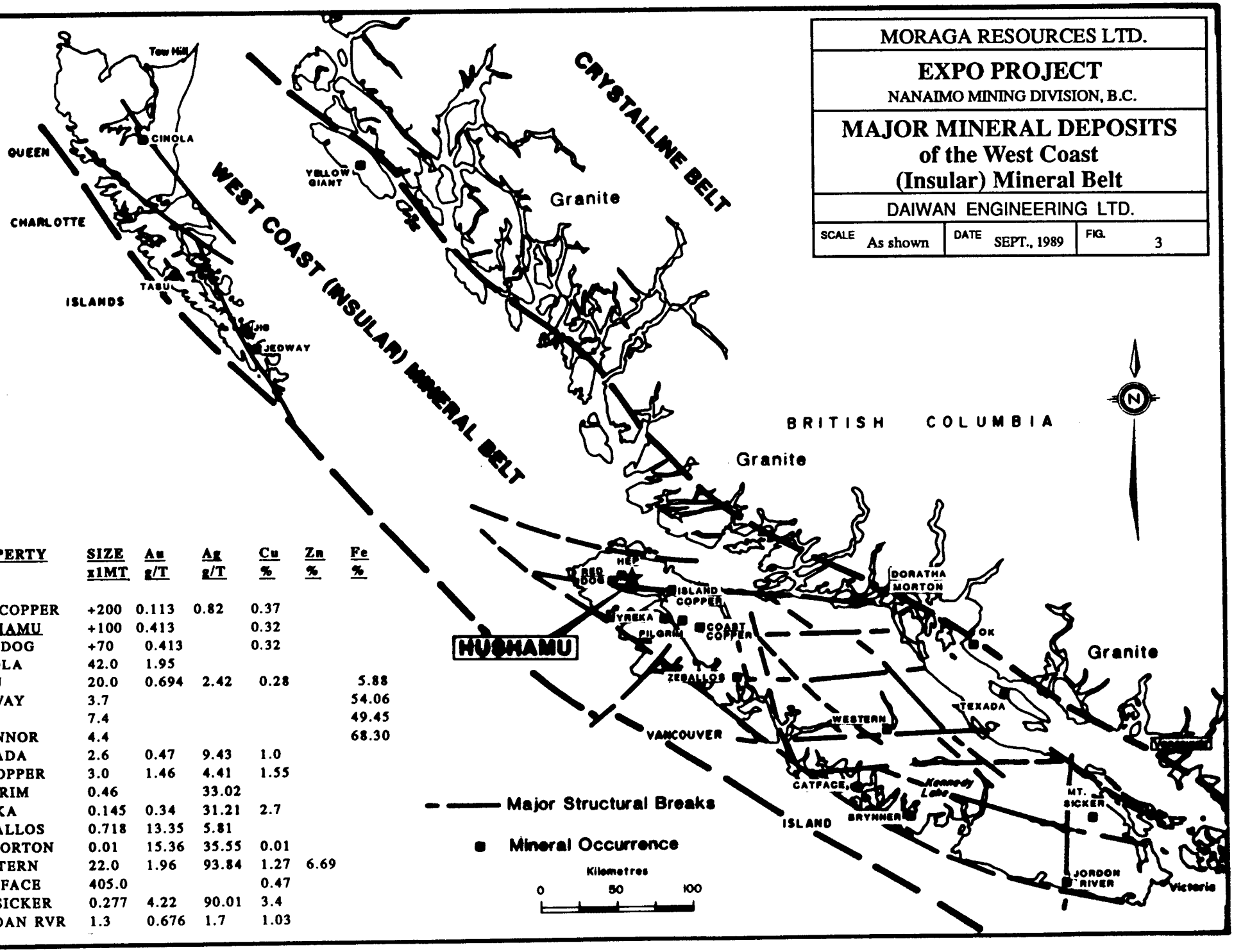
MAJOR MINERAL DEPOSITS of the West Coast (Insular) Mineral Belt

DAIWAN ENGINEERING LTD.

SCALE	DATE	FIG.
As shown	SEPT., 1989	3



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

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

REGIONAL GEOLOGY

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

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

The Vancouver Group is described as follows:[6]

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

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

(b) Karmutsen Formation: Upper Triassic Age

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

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

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REGIONAL GEOLOGY

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SCALE	DATE	FIG.
As Shown	SEPT., 1989	4

Airborne Magnetics Lineaments

Ground Mapping (Faults)

From B C D M Aerial Survey, 1963

PROPERTY

N.W. EXPO

RED DOG

HEP

Duriez

Hushamu Copper - Gold Deposit
> 100M Tonnes
0.32% Cu, 0.006% Mo, 0.413gm./t. Au

HUSHAMU MTN.

McBRYDE MTN.

WEST PEMBERTON

PEMBERTON HILLS

HOLBERG

H O L B E R G

I N L E T

LEGEND

JURASSIC AND CRETACEOUS

1 Cretaceous Sediments

JURASSIC Island Intrusions

2 Diorite

3 Quartz Feldspar Porphyry

LOWER JURASSIC

4 Bonanza Volcanics

TRIASSIC

5 Parson Bay Formation

6 Quatsino Formation

7 Karmutsen Formation

8 Siliceous Breccia
Propylitic Alteration
Pyrophyllite Alteration

Geological Contact

Breccia

Expo Property Boundary

KILOMETRES 0 1 2 3

Reproduced from BHP - Utah Mines Ltd. (1989 Regional Mapping)

270,000 N
260,000 N
250,000 N
240,000 N
230,000 N
220,000 N

200,000 E
210,000 E
220,000 E
230,000 E
240,000 E
250,000 E
260,000 E
270,000 E

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

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

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

(c) Quatsino Formation: Upper Triassic Age

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

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

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

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

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

(e) Harbledown Formation: Lower Jurassic Age

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

(f) Bonanza Formation: Lower Jurassic Age

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

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

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

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

Cretaceous Sediments

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

Intrusive Rocks

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

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

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

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

Structure

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

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

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

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

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

REGIONAL MINERALIZATION

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

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

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

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

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

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

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

GEOLOGY

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

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

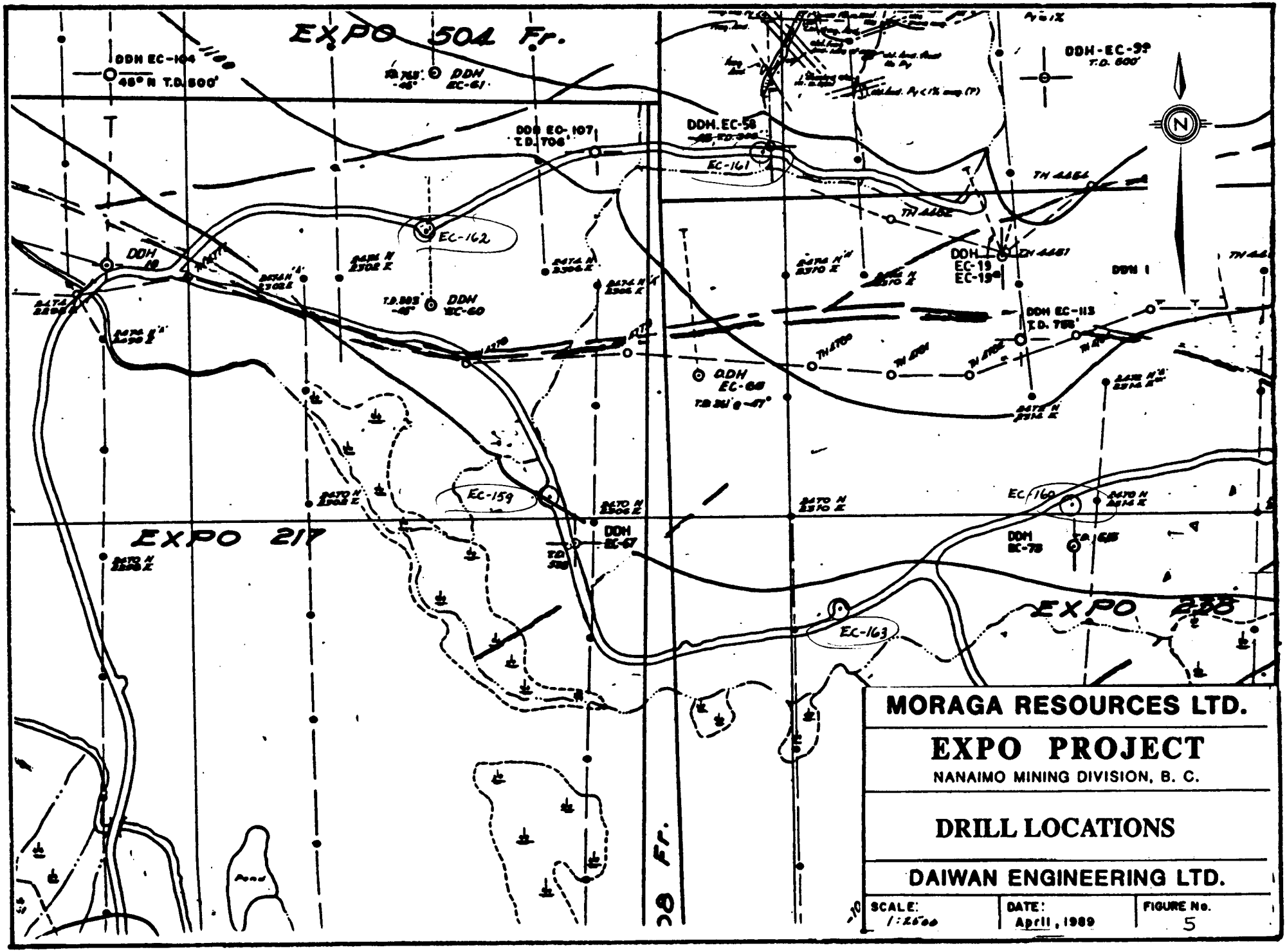
The volcanics are intruded by quartz-feldspar porphyry. These Island Intrusions give rise to localized propyllitic and pyrophyllitic alteration.

DRILL PROGRAM

The drill program, using NQ wireline, was carried out from November 11 to November 26, 1988 and consisted of 726.7m (2502 ft) of drilling in five holes. The drilling information is summarized in Table 1. The core is stored at the BHP-Utah Mines Island Copper site at Coal Harbour.

Table 1 Drill Summary

Hole #	Dip	Azimuth	Depth	Reason for Drilling	Location
EC-159	-60°	007°	274.3m/900ft	To test the south boundary of the Hushamu deposit	230591E/247032N
EC-160	-60°	360°	75.6m/248ft	To undercut silicified zone with 200 ppb Au	231492E/247000N
EC-161	-45°	270°	37.5m/123ft	To give E-W section of Hushamu deposit	230984E/247623N
EC-162	-60°	090°	187.2m/614ft	To give E-W section of Hushamu deposit	230394E/247492N
EC-163	-60°	360°	188.1m/617ft	To test south boundary of Hushamu deposit	231082E/246843N
			762.7m/2,502ft		



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EXPO PROJECT

NANAIMO MINING DIVISION, B. C.

DRILL LOCATIONS

DAIWAN ENGINEERING LTD.

SCALE:	DATE:	FIGURE No.
1:2500	April, 1989	5

EC-159 in composed of andesitic tuffs, flows and breccias with a 7m. fault zone at 93-100m. followed by a 3m. quartz-feldspar porphyry dyke at 101.7 - 104.9m. The hole ends in 7.3m. of granodiorite from 267-274.3m. Pyrite fracture fillings are prominent and quartz, quartz/carbonate and zeolite veining is common.

The highest copper and gold values obtained were 1.1% Cu at 123.0 - 126.0m and 52 ppb Au from 27.0 - 30.0m.

The strongest mineralization occurs between 12.19 - 78.0m where wt.ave. values are .0498% Cu and 26.9 ppb Au.

EC-160 is primarily composed of well fractured silicified andesite with some quartz and quartz/carbonate veining. The hole was abandoned at 75.6m. in fault gouge.

The highest single values were obtained at 15.0 - 18.0m in fault gouge with 410 ppb Au and .3713% Cu.

A 23.4m section form 12.6 - 36.0m returned wt. ave. of 225 ppb Au and .218% Cu. while the 39.6m section, from 36.0 - 75.6m, returned 64 ppb Au and .126% Cu.

EC-161 was abandoned at 37.5m. due to excessive caving. Only 17.5m. of the rock drilled was recovered with the rest lost to triconing. The hole is composed of andesite overlying quartz diorite with the quartz diorite carrying the better values.

The highest values returned were 430 ppb Au and .4648% Cu from a 1.68m section at 24.38 - 26.06m.

There are two separate core intervals divided by a 6.12m. section of triconed lost core. The upper section from 12.19 - 15.24m returned wt. ave. of 167 ppb Au and .1297% Cu while the lower section from 21.36 - 26.06m returned 276 ppb Au and .2443% Cu.

Andesite porphyry, tuff and breccias with strong shearing and gouge zones compose EC-162. The highest values of 910 ppb Au and .9330% Cu were obtained from a .3m sample at 111.1 - 111.4. Overall, the 114.8 m. section from 6.71 - 121.5m returned wt. ave. values of 349 ppb Au and .3027% Cu. Within this section are three mineralized areas of note.

6.71 - 18.0m (11.29m)		644 ppb Au, .4554% Cu.
52.0 - 67.2m (15.2m)		396 ppb Au, .2828% Cu.
110.0 - 116.0m (6.0m)		397 ppb Au, .4209% Cu.

Samples #34722-25 from 107.0 - 112.4m returned values of 127,125,156, and 84 ppm Mo.

EC-163 consists of andesite flows with zones of strong brecciation and gouge. The highest values were obtained at 59.7 - 62.0m with 1.379% Cu and at 75.3 - 76.3m with 480 ppb Au. The best mineralization occurs from 6.198.0m. (91.9m) where wt. ave. values are 134 ppb Au and .198% Cu.

CONCLUSIONS

The drilling has substantiated the gold and copper values indicated by the previous work of BHP-Utah Mines Ltd.

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

RECOMMENDATIONS

Further exploration should be conducted in the surrounding area with special attention paid to areas of increased silicification and quartz veining. These areas could be delineated using ground geophysics and geochemistry with follow-up programs of prospecting and geological mapping.

STATEMENT OF COSTS - Hushamu

1.0	Personnel		
	1 Senior Geologist	17.05 days @ $380	$ 6,478.51
	1 Project Geologist	58 days @ $240	13,920
	1 Field Assistant	8 days @ $105	840.00
			21,238.51
2.0	Assays		
	324 Core		$ 5,310.18
3.0	Food & Accommodation		$ 2,059.44
4.0	Transportation		$ 5,593.66
5.0	Supplies		$ 900.00
6.0	Equipment Rental		$ 823.92
7.0	Cat Contract		$ 1,145.89
8.0	Office		$ 248.87
9.0	Miscellaneous		$ 474.16
10.0	Drilling Contractor		$ 69,715.80
11.0	Regional Mapping Proportion (see attached schedule)		$ 20,972.92
			$128,483.35

STATEMENT OF COSTS - Regional

1.0	Personnel		
	1 Senior Geologist	19 days @ $380/day	$ 7,220.00
	1 Project Geologist	46 days @ $360/day	17,760.00
	1 Geologist	2 days @ $260/day	520.00
	1 Geologist	20.1 days @ $240/day	4,824.00
	1 Draftsperson	4.4 days @ $200/day	880.00
			31,204.00
2.0	Assays		
	125 Rocks	30 Element I.C.P.	2,248.92
	3 Rocks F.A.		30.60
	7 Rocks Geochem Au		69.00
	4 Rocks Ag, Au F.A.		72.96
			2,421.48
3.0	Food and Accommodation		2,932.63
4.0	Transportation		5,708.22
5.0	Supplies		2,681.93
6.0	Maps		1,792.94
7.0	Office		633.95
8.0	Miscellaneous		833.16
8.0	Drafting		14,709.96
			$62,918.77

CERTIFICATE OF QUALIFICATIONS

I Edward D. Harrington of the City of Vancouver, British Columbia, do hereby certify that:

1. I am a geologist employed by Daiwan Engineering Ltd. with offices of 1030 - 609 Granville Street, Vancouver, British Columbia, V7Y 1G5.

2. I am a graduate of Acadia University, Wolfville, Nova Scotia, with a B.Sc. degree in Geology (1971).

3. I have practiced my profession as a Geologist for over 13 years.

4. This report is based on my personal knowledge of the Expo Property, a review of geological and geochemical data from previous work and field work under my personal supervision.

5. The work program was carried out from November 11 to 26, 1988.

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

Edward D. Harrington, B.Sc.
August 15, 1989

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APPENDIX 1

CLAIM DATA

Schedule - Claims of the Hushamu Group, Nanaimo M.D., B.C.

Claim Mame	# of units	record #
Hep 34	1	19012
Hep 35	1	19013
Hep 36	1	19014
Hep 37	1	19015
Hep 38	1	19016
Hep 39	1	19017
Hep 45	1	19023
Hep 49	1	19027
Hep 50	1	19028
Hep 51	1	19029
Hep 54	1	19032
Hep 55	1	19033
Hep 56	1	19034
Hep 58	1	19036
Hep 59	1	19037
Hep 62	1	19040
Hep 63	1	19041
Hep 64	1	19042
Hep 65	1	19043
Hep 66	1	19044
Hep 67	1	19045
Hep 68	1	19046
Hep 86	1	20216
Hep 87	1	20217
Hep 88	1	20218
Hep 89	1	20219
Hep 90	1	20220
Hep 91	1	20221
Hep 94	1	20224
Hep 95	1	20225
Hep 97	1	20227
Expo 102	1	20474
Expo 103	1	20475
Expo 104	1	20476
Expo 105	1	20477
Expo 106	1	20478
Expo 109	1	20232
Expo 111	1	20234
Expo 112	1	20235
Expo 113	1	20236
Expo 114	1	20237
Expo 115	1	20238
Expo 117	1	20240
Expo 118	1	20241
Expo 120	1	20243

Claim Name	# of units	record #
Expo 129	1	20252
Expo 130	1	20253
Expo 139	1	20262
Expo 141	1	20264
Expo 142	1	20265
Expo 144	1	20267
Expo 149	1	20272
Expo 150	1	20273
Expo 151	1	20274
Expo 152	1	20275
Expo 153	1	20276
Expo 154	1	20277
Expo 161	1	20284
Expo 162	1	20285
Expo 163	1	20286
Expo 164	1	20287
Expo 177	1	20288
Expo 178	1	20289
Expo 179	1	20290
Expo 181	1	20292
Expo 183	1	20294
Expo 184	1	20295
Expo 186	1	20297
Expo 188	1	20299
Expo 189	1	20300
Expo 191	1	20302
Expo 193	1	20304
Expo 194	1	20305
Expo 195	1	20306
Expo 196	1	20307
Expo 197	1	20308
Expo 198	1	20309
Expo 217	1	20328
Expo 218	1	20329
Expo 238	1	20492
Expo 317	1	20338
Expo 318	1	20339
Expo 319	1	21574
Expo 320	1	21575
Expo 321	1	21576
Expo 322	1	21577
Expo 503 Fr	1	20612
Expo 521	1	21613
Expo 522	1	21614
Expo 523	1	21615
Expo 524	1	21616
Expo 1008 Fr	1	27352

Don 1 Fr	1	29501
Don 2 Fr	1	29502
Don 3 Fr	1	29633
Don 7 Fr	1	29634
Don 8 Fr	1	29635
Total	**97 units**	

APPENDIX 2

SAMPLE DESCRIPTIONS

Sample#	Location	Type	Description	Results
33001	Pemberton Main	chip	xstal tuff w sk. hyd. alt.	327 Mn
33002	Pemberton Main	chip	xstal tuff w mo. hyd. alt.	19 ppb Au
33003	Pemberton Main	chip	heavily silic. w Fe stain	
33004	Pemberton Main same site as PED#6	chip	grey volcaniclastic 5-10% Py	
33005	Pemberton Main	chip	rhyolitic flow; breccia 2-3% Py	
33006	Pemberton Main	chip	rotten and.	
33007	Pemberton Main	chip	porph. and. breccia	
33008	Pemberton Main	chip	and. porph. wk. hydro alt.	449 Mn/12 ppb Au
33009	Pemberton Main	chip	and. w. wk. hydro alt.	713 Mn/18 ppb Au
33010	Pemberton Main	chip	bonanza volc. wk. hyd. alt.	1071 Mn.
33011	Pemberton Main	chip	bonanza volc. ≤ 1% Py	363 Mn
33012	WN 900 Quarry	chip		233 Mn
33013	WN 900	chip	diorite w feld alt.	394 Mn
33014	WN Main "F"	chip	B. volc. rotten wk. hyd. alt.	388 Mn/10 ppb Au
33015	Cleskagh Ck. @ Rd.	float	siliceous, angular bldr. grey Py patch	
33016	Cleskagh Ck. @ Rd.	float	chalcedonic frag. w Fe stain	
33017	Cleskagh Ck. @ Rd.	float	propyllitic bldr. slight kaolin	802 Mn
33018	Cleskagh Ck. @ Rd.	chip	Py breccia w qtz-carb vein	
33019	WN Main Quarry 300m W of WN 100	chip	B. volc w 1cm qtz. vein	1,246 Mn
33020	WN 101B	chip 5m	B. volc wk-mod hydro. alt.	446 Mn
33021	WN 101B	chip 3m	B. volc silic. wk pink alt. in veins	1,053 Mn
33022	Main Rd.	chip	B. volc we-mod alt.	578 Mn

Sample#	Location	Type	Description	Results
33023	Side Rd. off Holberg Connection	chip	B. volc breccia w wk-mod hydro alt.	442 Mn
33024	Side Rd. off Holberg Connection	chip	B. volc breccia w wk-mod hydro alt.	588 Mn
33025	Side Rd. off Holberg Connection	chip	B. volc w wk. hydro alt. 565 Sr/157V	1,262Mn/
33026	Side Rd. off Holberg Connection	chip	B. volc w hydro breccia 1m	342 Mn/104V
33027	Side Rd. off Holberg Connection	chip	B. volc w hydro breccia over 1m	550 Mn/126 Sr/ 119V
33028	Side Rd. off Holberg Connection	chip	B. volc w hydro breccia 3-4 m	816 Mn
33029	Side Rd. off Holberg Connection	chip	B. volc wk hydro alt.	352 Mn/120 Sr
33030	Side Rd. off Holberg Connection	chip	B. volc wk hydro alt	684 Mn/26 ppb Au
33031	Red Dog	chip 1.5 m	B. volc tuffaceous wk. hydro alt. w carb/zeol	898 Mn
33032	Red Dog	float	hydro breccia w carb/zeol	471 Mn
33033	Red Dog	chip 2m	B. volc tuffaceous wk hydro alt.	700 Mn
33034	Red Dog	chip 1m	B. volc tuff. hydro alt. fractures	1,044 Mn
33035	Red Dog (other claim)	chip	intrusive hydro alt.	856 Cu/320 ppb Au
33036	Red Dog (other claim)	chip	intrusive hydro alt.	290 Sr/12 ppb Au
33037	Red Dog (other claim)	chip	intrusive hydro alt.	149 Mn/41 ppb Au
34501	McIntosh Mtn. 20m N. 2440N, 2329E	grab 5m	heavily silicified	82 Mo/56 ppb Au
34502	McIntosh Mtn. NW of 34501	chip	heavily silicified	61 ppb Au
34503	McIntosh Mtn. 12m N. of 34554	grab	heavily silicified w 1/2" qtz. stringers	

Sample#	Location	Type	Description	Results
34504	McIntosh Mtn. 20m N. of 34503	grab	heavily silicified w 1/4" qtz. stringers	19 ppb Au
34505	McIntosh Mtn.	grab	heavily silicified w 1/4" qtz. stringers, minor limonite	70 Mo/113 ppb Au
34506	McIntosh Mtn.	grab	milky qtz. zone 1.5m	26 ppb Au
34507	H1000	grab 3m	massive py	17 ppb Au
34508	H1000	grab 3m	massive Py	429 Mn
34509	H1000	grab 2m	QFP w dissem. Py	475 Mn/11 ppb Au
34510	H1000	chip	QFP	
34511	H1000	grab	QFP w clay	
34512	H1000	grab 3m	QFP w dis. Py grey	
34513	H1000	grab	QFP w dis. Py grey	
34514	H1000	grab	QFP no Py	390 Mn
34515	H1020	grab	QFP w kaolin	
34516	H1020	grab	QFP(?) sil. kaolin Py	120 Mn
34517	H1020	grab		187 Mn
34518	H1020	grab 3m	QFP w Py grey	394 Mn
34519	H1020	grab 3m	QFP w Py grey	
34520	H1031	grab		156 Sr
34521	Quarry Between Pm 200 + PM 300	grab	QFP w Py clay alt.	162 Mn
34522	Pemberton 100		sinter cone kaolin andesite	
34523	Pemberton 100 pit 100m W of Sinter Cones		bedded Py	556 Mn/110V/ 16 ppb Au
34524	Pemberton 100 1100m W Sinter Cones	grab		797 Mn/147V

Sample#	Location	Type	Description	Results
34525	Pemberton 100	grab 3m	bedded py (across bedding)	460 Mn/122V
34526	Pemberton 100	grab 3m	bedded Py W of Sinter Cones (across bedding)	
34527	Pemberton 100	grab	andesite Bx. siliceous kaolin	
34528	Pemberton 100	grab	QFP	1,578 Mn
34529	Pemberton 100		andesite Bx. siliceous	
34530	Holberg Connection		qtz. vein	411 Mn/55 ppb Au
34531			fumarole Bx.	
34532	Rd. W of Hushamu Lake		B. volc dis. Py bleached	
34533	Rd. W of Hushamu Lake 25m E 34532		carb veinlets *limonite	139 Zn/1,060 Mn/ 9 ppb Au
34534	Rd. W of Hushamu Lake		bonanza carb veinlets	700 Mn/270 Sr
34535				15 ppb Au
34536	Rd. SSW of Hushamu Lake		volc grey siliceous Py	1,193 Mn
34537	Rd. SSW of Hushamu Lake			QFP w clay dis. Py
34538	Holberg Connection		Limestone (old sawmill site)	128 Mn/323 Sr
34539	Hushamu Main 250m S Jnct. w 1400		hydro alt. kaolinized intrusive	350 Mn
34540	Hushamu Main 250m S Jnct. w 1400		hydro alt. kaolinized intrusive	210 Mn
34541	H1500 Jnct. H1540		B. volc w carb stringers	463 Mn/117V
34542	WN Main	grab	B. volc kaolinized	373 Mn
34543	WN Main	grab	B. volc Py	

Sample#	Location	Type	Description	Results
34544	WN 1200 Pit SW of Rd.	grab	B. volc Py	
34545	Hushamu Rd. 2K N of Dump		rusty conglomerate	415 Mn/104 Sr
34546 E of Rd.	Red Dog EC-1 Rd.		B. volc sil. bleached Py vein	1,509 Cu/290 ppb Au
34547	Red Dog EC-1 Rd.	grab 2.5m	B. volc limonite	1,374 Cu/134V/ 45 ppb Au
34548	Red Dog EC-1 Rd.	grab	surficial conglomerate	595 Cu/128V/ 13 ppb Au
34549	Red Dog EC-1 Rd. 20m S 34548	grab 1.5m	B. volc hydro alt.	581 Cu/440 ppb Au
34550	Red Dog EC-1 Rd.		surficial conglomerate	442 Mn/22 ppb Au
34551	McIntosh Mtn.	chip	heavily siliceous	19 ppb Au
34552	McIntosh Mtn.	chip	siliceous sinter	148 Mo/479 Cu/ 352 As/109 Au
34553	McIntosh Mtn.	chip	stockwork siliceous w qtz. veins ≤ 1/4"	85 ppb Au
34554	McIntosh Mtn.	chip	stockwork siliceous w qtz. veins ≤ 1/4"	
34555	McIntosh Mtn.	grab	wk. sinter w qtz. stringers	46 ppb Au
34556	McIntosh Mtn. SW DDH 154	chip 0.5m	heavily silicified w qtz. stringers ≤ 1 cm	1,205 ppb Au
41501	Red Dog Resample 34546	grab 2.5m	sil. Py vein	63 ppb Au
41502	Red Dog Resample 34547	grab	float selected from sil. Zn east wall of quarry	192 ppb Au
41503	Rd. W End of Nahwitti Lake	grab	float sil. skarn Py	13 ppb Au/206 Mn

Sample#	Location	Type	Description	Results
41504	Rd. W End of Nahwitti Lake	grab	float sil. skarn Py	575 Cu/101 As/ 65 ppb Au
41505	Rd. W End of Nahwitti Lake	grab	float sil. volc w ribbon qtz.	609 Mo/622 As/ 88 ppb Au
41506	Rd. W End of Nahwitti Lake 200m S	grab	float black bedded limestone w w calcsil. + Py	316 Mn/143 Sr
41507	Rd. W End of Nahwitti Lake 200m S	grab	float black bedded Lst without calcsil + Py	221 Mn/258 Sr
41508	Red Dog Pit L1 #1	chip		232 Cu/137 Mn/ 108V/10 ppb Au
41509	Red Dog Pit L1 #2	chip		386 Mo/666 Cu/ 75 ppb Au
41510	Red Dog Pit L1 #3	chip		166 Mo/1,947 Cu/ 28 ppb Au
41511	Red Dog Pit L2 #1	chip		364 Cu/459 Mn/ 17 ppb Au
41512	Red Dog Pit L2 #2	chip		367 Cu/352 Mn/ 19 ppb Au
41513	Red Dog Pit L2 #3	chip		140 Mo/32 ppb Au
41514	Red Dog Pit L2 #4	chip		121 Mo/141 ppb Au
41515	Red Dog Pit L3 #1	chip		83 Mo/43 ppb Au
41516	Red Dog Pit L3 #2	chip		207 Mo/200 ppb Au
41517	Red Dog Pit L3 #3	chip		175 Mo/55 ppb Au
41518	Red Dog Pit L4 #1	chip		471 Cu/256 Mn/ 36 ppb Au
41519	Red Dog Pit L4 #2	chip		164 Mo/4,811 Cu/ 550 ppb Au
41520	Red Dog Pit L4 #3	chip		89 Mo/1,900 Cu/ 290 ppb Au

Sample#	Location	Type	Description	Results
41521	Red Dog Pit L4 #4	chip		92 Mo/7,177 Cu/ 1,060 ppb Au
41522	Red Dog Pit L4 #5	chip		192 Mo/1,003 Cu/ 1,140 ppb Au
41523	Red Dog Pit L5 #1	chip		63 Mo/3,150 Cu/ 820 ppb Au
41524	Red Dog Pit L5 #2	chip		407 Cu/146 ppb Au
45125	Red Dog Pit L6 #1	chip		211 Mo/1,862 Cu/ 230 ppb Au
41526	Red Dog Pit L7 #1	chip		68 Mo/110 Cu/ 31 ppb Au
41527	Red Dog Pit L8 #1	chip		3,399 Cu/229 Mn/ 29 ppb Au
41528	Holberg Rd. Quarry 200m up Rd. to LCP WIN 1		epidote Py calc. skarn contact zone granite/Parson Bay	996 Zn/1,330 Mn/ 53 ppb Au/ 22.3 Ag
41529	Holberg Rd. Quarry 200m up Rd. to LCP WIN 1		chloritized carb. veins	422 Mn/135 Sr
41530	Rd. to LCP WIN 1		Parson Bay tuff w limonite siliceous next to granite contacts	816 Mn
41531	Holberg Rd.		B. volc hydro alt. limonite siliceous	40 ppb Au
41532	Holberg Rd.		B. volc hydro alt. clay gouge portion	315 Zn/221 Mn/ 330 ppb Au

APPENDIX 3

ASSAY CERTIFICATES

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: DEC 12 1988

DATE REPORT MAILED: Dec. 13/88

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU** BY FIRE ASSAY FROM 1/2 A.T.

SIGNED BY..... D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING PROJECT EXPO FILE # 88-5978R

SAMPLE#	AU** oz/t
34505	.003
34552	.004
34556	.035

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716 DATE RECEIVED: DEC 9 1988
DATE REPORT MAILED: Dec. 13/88.

ASSAY CERTIFICATE

- SAMPLE TYPE: ROCK AU** AND AG** BY FIRE ASSAY FROM 1 A.T.

SIGNED BY..C. Leong. D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT HARRINGTON FILE # 88-6214

SAMPLE#	Ag** OZ/T	Au** OZ/T
A	.01	.001
B	.01	.009
C	.08	.017
D	.01	.001

· ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Rock Chips AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: DEC 21 1988 DATE REPORT MAILED: Dec 23/88 . SIGNED BY. C. Leong ..D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT EXPO File # 88-6355 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
C 33023	1	30	4	36	.1	3	11	442	4.59	2	5	ND	1	46	1	2	3	66	.32	.063	8	3	1.06	219	.01	2	2.70	.05	.06	1	1
C 33024	1	40	6	41	.1	7	10	588	3.54	16	5	ND	1	51	1	2	2	97	2.27	.045	5	11	.84	31	.11	2	4.35	.02	.08	1	2
C 33025	1	66	5	76	.1	2	11	1262	10.63	11	5	ND	1	565	2	2	2	157	1.28	.100	5	2	.95	78	.29	7	3.26	.07	.09	1	1
C 33026	1	32	17	39	.1	2	9	342	5.03	19	5	ND	1	92	2	2	2	104	4.34	.049	4	8	.64	14	.13	3	6.74	.02	.09	1	1
C 33027	1	27	15	43	.1	6	10	550	3.11	22	5	ND	1	126	1	2	3	119	4.95	.044	8	12	.77	26	.09	5	7.00	.02	.10	3	1
C 33028	1	27	5	58	.1	2	13	816	4.05	25	5	ND	1	72	1	2	2	92	2.84	.046	8	9	1.07	11	.10	5	4.61	.02	.05	1	1
C 33029	1	13	9	25	.1	3	5	352	1.61	3	5	ND	1	120	1	4	2	36	5.78	.038	5	4	.23	34	.05	4	7.05	.02	.12	1	1
C 33030	1	288	9	51	.5	4	13	684	3.59	30	5	ND	1	54	1	2	2	34	3.30	.050	5	8	1.19	8	.09	3	3.43	.01	.07	1	26
C 33031	1	28	7	58	.1	3	10	898	3.74	3	5	ND	1	33	1	2	2	79	1.40	.050	3	7	.99	72	.03	5	3.32	.06	.11	1	1
C 33032	1	10	38	38	.1	3	7	471	2.15	6	5	ND	1	74	1	4	3	41	3.90	.030	4	6	.50	45	.01	4	5.43	.03	.11	1	2
C 33033	1	42	29	62	.1	10	10	700	3.41	4	5	ND	1	96	1	2	2	53	2.43	.065	3	11	1.11	155	.10	3	4.77	.02	.12	1	1
C 33034	1	29	15	80	.1	7	13	1044	4.47	23	5	ND	1	59	2	2	2	87	1.72	.045	3	6	1.11	48	.05	3	4.49	.04	.09	1	1
C 33035	72	856	13	37	.3	5	5	58	9.90	3	5	ND	2	3	1	2	2	65	.03	.047	2	6	.43	27	.02	5	1.36	.01	.19	1	320
C 33036	5	403	5	23	.1	5	12	66	2.91	2	5	ND	1	290	1	4	2	61	.82	.089	2	3	.95	115	.02	2	2.37	.09	.07	1	12
C 33037	5	254	8	33	.3	8	11	149	4.66	2	5	ND	1	92	1	2	2	51	3.21	.058	3	8	.97	13	.05	2	5.51	.01	.11	1	41
B 41503	10	83	6	23	.2	26	26	206	5.55	41	5	ND	1	7	1	3	3	18	.10	.018	2	14	.49	15	.04	2	.71	.01	.01	1	73
B 41504	27	575	17	39	.1	13	17	77	13.74	101	5	ND	2	7	1	3	3	38	.04	.010	2	4	.10	9	.01	4	.54	.01	.01	2	65
B 41505	609	88	53	7	.1	6	1	16	2.76	622	5	ND	1	3	1	18	2	15	.03	.005	2	6	.01	2	.01	3	.15	.01	.01	1	88
B 41506	1	15	6	11	.3	3	3	316	1.68	17	6	ND	1	143	1	2	2	2	39.71	.050	2	1	.03	1	.01	2	.08	.01	.01	1	1
B 41507	1	8	2	3	.3	3	3	221	.53	9	7	ND	1	258	1	2	2	1	42.15	.012	2	2	.06	27	.01	2	.23	.02	.01	1	1
B 41508	5	232	11	29	.1	2	5	137	5.16	3	5	ND	17	21	1	2	2	108	.52	.033	4	7	.67	189	.16	2	2.49	.03	.10	1	10
B 41509	386	666	4	14	.1	2	8	15	14.24	12	5	ND	6	3	1	2	2	51	.01	.051	2	1	.01	540	.10	2	.31	.01	.09	1	75
B 41510	166	1947	13	30	.2	7	13	4	35.51	35	5	ND	5	5	2	2	2	68	.41	.059	2	1	.01	18	.01	2	.43	.01	.09	3	28
B 41511	5	364	11	72	.1	6	11	459	3.77	8	5	ND	4	37	1	2	2	69	.42	.038	6	5	1.58	43	.11	5	2.42	.03	.13	1	17
B 41512	3	367	13	49	.1	8	9	352	3.49	6	5	ND	5	11	1	2	2	78	.20	.054	7	6	1.71	39	.11	3	2.70	.03	.12	1	19
B 41513	140	138	2	3	.2	4	1	18	1.77	19	5	ND	1	2	1	2	2	11	.01	.015	2	5	.02	7	.01	2	.11	.01	.04	1	32
B 41514	121	238	2	3	.2	6	1	18	3.28	17	5	ND	2	7	1	2	2	16	.01	.021	2	4	.01	23	.01	2	.34	.02	.09	1	141
B 41515	83	194	2	14	.2	7	7	92	1.84	2	5	ND	1	1	1	2	2	10	.01	.005	2	6	.42	13	.01	4	.81	.01	.08	1	43
B 41516	207	218	4	1	.2	4	1	12	1.76	2	5	ND	2	2	1	2	2	7	.01	.004	3	4	.01	11	.01	2	.20	.01	.07	1	200
B 41517	175	45	2	1	.1	4	1	12	.75	3	5	ND	5	1	1	2	2	3	.01	.013	6	6	.01	4	.01	2	.19	.01	.06	1	55
B 41518	8	471	7	34	.2	8	23	256	5.15	11	6	ND	5	14	1	2	2	78	.28	.037	5	6	1.63	29	.11	4	2.26	.05	.15	1	36
B 41519	160	4911	5	11	.5	6	24	25	3.37	4	7	ND	4	2	1	2	2	19	.02	.024	5	2	.05	20	.01	3	.67	.01	.10	1	550
B 41520	89	1900	2	23	.3	6	11	51	5.45	2	5	ND	4	2	1	2	3	38	.02	.025	6	2	.12	27	.02	2	.83	.01	.15	1	290
B 41521	92	7177	5	34	.6	7	15	90	7.51	5	5	2	4	1	1	3	20	20	.01	.012	2	4	.24	11	.01	5	1.07	.01	.07	1	1060
B 41522	192	1003	2	20	.7	5	8	49	5.85	4	6	2	4	2	1	2	2	20	.01	.000	6	2	.13	16	.01	2	.65	.01	.12	1	1140
B 41523	63	3150	3	40	.4	8	16	76	8.13	2	5	ND	3	2	1	2	2	19	.01	.005	2	2	.18	16	.01	3	.75	.01	.12	1	820
STD C/AU-R	18	59	43	132	7.1	66	30	1048	4.25	43	21	8	40	49	20	16	25	61	.49	.098	41	55	.89	180	.07	38	1.95	.06	.14	11	480

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
B 41524	50	407	2	5	.1	4	9	17	3.43	2	5	ND	1	1	1	2	4	4	.01	.001	2	5	.01	4	.01	2	.15	.01	.08	1	146
B 41525	211	1862	2	2	.1	2	5	27	2.51	2	5	ND	1	2	1	2	4	6	.01	.004	2	5	.07	7	.01	2	.34	.01	.09	1	230
B 41526	68	110	2	2	.1	4	2	19	1.23	3	5	ND	1	2	1	2	2	3	.01	.005	2	9	.03	5	.01	4	.17	.01	.05	1	31
B 41527	32	3399	11	43	.1	51	14	229	3.98	12	5	ND	1	35	1	2	3	79	.49	.043	4	48	1.97	21	.04	2	3.72	.08	.02	1	29
B 41528	2	237	42	996	22.3	3	58	1330	2.98	28	5	ND	1	73	8	2	23	41	4.10	.053	2	4	.95	1	.07	3	1.22	.01	.01	1	53
B 41529	3	144	9	43	.5	49	21	422	2.80	16	5	ND	1	135	1	2	2	57	4.06	.052	3	85	1.33	48	.09	2	5.26	.04	.05	3	5
B 41530	2	27	3	105	1.0	5	5	816	.87	3	5	ND	2	50	1	2	2	16	12.98	.029	4	9	.42	17	.04	2	.85	.02	.02	1	3
B 41531	3	39	17	265	1.2	1	8	38	10.34	11	8	ND	2	7	3	2	4	51	.11	.196	2	6	.04	35	.15	2	.59	.01	.17	1	40
B 41532	2	68	18	315	6.0	14	32	221	8.77	22	5	ND	1	4	3	2	3	32	.15	.041	2	6	.31	20	.18	2	.80	.01	.14	1	330
STD C/AU-R	19	63	40	134	7.4	72	31	1059	3.99	43	21	8	39	51	19	18	24	60	.51	.092	40	59	.94	179	.07	38	1.95	.06	.14	13	470

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ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: DEC 2 1988 DATE REPORT MAILED: Dec 7/88 SIGNED BY. C. Leong ..D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT MORAGA RES.-EXPO File # 88-6115

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 34515	3	24	12	6	.1	5	3	5	3.47	12	5	ND	1	23	1	2	2	20	.02	.017	2	8	.02	73	.01	2	.39	.01	.01	1	3
C 34516	1	29	6	13	.1	4	6	120	7.08	13	5	ND	1	14	1	2	2	74	.01	.138	3	7	.39	126	.01	2	1.95	.01	.07	1	1
C 34517	1	66	13	28	.1	11	22	187	7.44	9	5	ND	1	5	1	2	2	46	.03	.061	4	9	.59	13	.01	2	1.56	.01	.04	1	1
C 34518	2	84	15	93	.1	11	19	394	5.23	13	5	ND	1	18	1	2	2	23	.68	.050	7	4	.51	30	.01	3	1.24	.01	.06	1	1
C 34519	4	115	17	33	.1	13	19	38	6.27	13	5	ND	2	2	1	2	2	18	.02	.004	2	6	.10	16	.01	2	.70	.01	.02	1	1
C 34520	2	22	6	5	.1	1	3	71	3.81	19	5	ND	1	156	1	2	2	19	.02	.052	21	2	.19	133	.01	2	1.19	.01	.11	1	2
C 34521	1	53	8	25	.1	27	19	162	6.07	8	5	ND	1	5	1	2	2	18	.05	.031	8	12	.28	21	.01	2	.98	.01	.09	2	1
C 34522	1	13	4	3	.1	1	2	18	.29	2	5	ND	1	25	1	2	2	3	.02	.004	2	2	.02	420	.01	2	.47	.01	.01	1	1
C 34523	1	47	7	57	.1	7	9	556	6.22	8	5	ND	1	20	1	2	2	110	.24	.052	11	19	1.05	61	.05	2	2.45	.04	.05	1	16
C 34524	1	69	14	77	.1	13	13	797	6.15	9	5	ND	1	27	1	2	2	147	.30	.056	12	25	1.72	101	.02	2	3.89	.05	.04	1	1
C 34525	5	53	7	53	.1	16	17	460	5.99	4	5	ND	1	30	1	2	2	122	.46	.040	8	20	1.10	24	.08	3	1.97	.05	.07	1	1
C 34526	5	41	9	9	.1	8	7	13	2.80	77	5	ND	1	5	1	2	2	3	.01	.001	2	4	.01	41	.01	2	.32	.01	.01	2	1
C 34527	3	10	3	2	.1	2	1	12	1.42	23	5	ND	1	11	1	2	2	13	.03	.004	2	3	.02	173	.01	2	.32	.01	.01	1	1
C 34528	1	54	10	73	.1	4	15	1578	4.79	10	5	ND	1	38	1	2	2	61	6.47	.050	13	9	.50	60	.01	2	2.09	.01	.08	1	4
C 34529	6	8	2	1	.1	11	2	28	.83	12	5	ND	1	4	1	7	3	1	.04	.002	2	10	.01	14	.01	3	.02	.01	.01	2	1
C 34530	1	30	60	27	.7	3	1	411	.22	2	5	ND	1	3	1	2	2	2	.12	.020	2	20	.06	1	.01	2	.21	.01	.01	2	55
C 34531	4	156	14	19	.1	1	9	2	17.43	5	5	ND	1	7	1	2	2	91	.01	.061	2	3	.01	270	.01	2	.32	.01	.01	1	1
C 34532	1	70	26	109	.2	5	19	1012	6.09	26	5	ND	1	26	1	2	2	66	.63	.060	4	6	2.14	29	.08	2	2.18	.01	.12	1	2
C 34533	1	116	26	139	.2	12	15	1060	6.10	20	5	ND	1	55	1	2	2	70	1.05	.056	2	24	2.31	45	.14	2	3.46	.01	.05	1	9
C 34534	1	24	8	55	.1	3	13	700	4.85	5	5	ND	1	270	1	2	2	61	.78	.070	2	5	2.04	62	.06	2	2.93	.03	.09	1	1
C 34535	2	55	22	9	.1	3	8	14	5.33	6	5	ND	1	18	1	2	2	10	.02	.005	2	2	.03	26	.01	2	.20	.01	.01	1	15
C 34536	1	38	9	88	.1	5	11	1193	4.33	5	5	ND	1	43	1	2	2	78	.40	.073	4	8	1.96	56	.14	3	2.69	.05	.02	1	1
C 34537	4	26	8	5	.1	26	21	6	5.80	2	5	ND	2	16	1	2	2	6	.01	.003	2	3	.02	20	.01	2	.86	.01	.04	1	1
C 34538	1	5	2	3	.1	1	1	128	.10	5	6	ND	1	323	1	2	2	3	37.54	.008	2	1	.05	8	.01	3	.14	.01	.01	2	1
C 34539	1	29	6	40	.1	7	8	350	2.89	2	5	ND	1	58	1	2	2	54	1.66	.034	5	11	.61	11	.06	2	2.75	.01	.05	1	1
C 34540	1	16	8	24	.1	1	2	210	1.94	8	5	ND	2	40	1	2	2	22	1.04	.022	3	3	.37	13	.05	2	1.94	.01	.03	1	2
C 34541	1	49	8	174	.1	23	32	463	5.37	6	5	ND	1	160	2	2	2	117	3.30	.071	4	18	.71	14	.07	3	5.36	.07	.07	1	1
STD C/AU-R	17	60	38	132	6.6	67	31	1028	4.18	40	21	7	37	47	18	18	21	58	.48	.092	39	57	.91	173	.06	34	1.98	.06	.13	11	510

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: NOV 23 1988 DATE REPORT MAILED: Nov 29/88 SIGNED BY. C. Leong ..D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT EXPO File # 88-5978

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 34501	82	61	8	5	.1	1	1	17	1.75	87	5	ND	1	7	1	2	2	2	.01	.007	2	7	.01	1	.01	2	.04	.01	.01	3	56
C 34502	17	18	8	5	.1	8	1	18	.58	2	5	ND	1	9	1	2	2	2	.01	.008	2	7	.01	1	.01	3	.04	.01	.01	1	61
C 34503	25	36	3	5	.1	3	1	33	.81	41	5	ND	1	3	1	2	4	3	.01	.003	2	8	.01	1	.01	3	.03	.01	.01	4	2
C 34504	18	20	5	4	.1	4	1	18	.44	17	5	ND	1	5	1	2	2	1	.01	.003	2	7	.01	1	.01	2	.02	.01	.01	1	19
C 34505	70	88	6	4	.1	1	1	11	1.99	198	5	ND	1	5	1	3	2	15	.01	.003	2	8	.01	1	.01	3	.11	.01	.01	2	113
C 34506	28	12	2	1	.1	1	1	36	.18	3	5	ND	1	1	1	2	2	1	.01	.001	2	2	.01	1	.01	2	.10	.01	.01	1	26
C 34507	4	81	12	5	.1	8	16	5	6.23	2	5	ND	1	11	1	2	2	12	.01	.003	2	2	.01	10	.01	6	.33	.01	.01	1	17
C 34508	2	45	21	30	.1	1	12	429	5.88	10	5	ND	2	3	1	2	2	22	.01	.086	5	1	.90	22	.01	7	2.06	.01	.10	1	2
C 34509	1	74	6	44	.1	8	14	475	6.38	7	5	ND	2	28	1	2	2	57	.97	.061	6	10	.92	18	.21	7	2.40	.02	.11	1	11
C 34510	4	68	2	49	.1	5	13	96	4.35	6	5	ND	2	13	1	2	2	14	.17	.064	11	3	.32	26	.01	5	1.47	.01	.10	1	1
C 34511	1	51	13	17	.1	1	6	77	4.54	4	5	ND	1	33	1	2	2	12	.54	.047	8	1	.14	72	.01	3	1.07	.01	.09	1	5
C 34512	1	91	3	56	.1	10	24	79	4.76	4	5	ND	2	22	1	2	2	18	.40	.051	16	1	.59	16	.01	3	1.71	.01	.09	1	1
C 34513	4	82	10	48	.1	7	16	61	5.18	19	5	ND	2	10	1	2	2	25	.35	.064	18	2	.48	10	.01	4	1.77	.01	.10	1	2
C 34514	16	86	4	36	.1	8	22	390	6.69	3	5	ND	3	2	1	2	2	25	.02	.086	4	4	.71	8	.01	2	1.70	.01	.08	1	1
C 34551	38	29	5	2	.2	1	1	12	.86	3	5	ND	2	10	1	2	2	3	.01	.006	2	2	.01	9	.01	2	.09	.01	.01	1	19
C 34552	148	479	5	16	.1	1	9	3	16.52	352	5	ND	4	2	1	2	2	49	.01	.011	2	4	.01	4	.01	3	.29	.01	.01	1	109
C 34553	90	26	5	4	.1	1	2	6	3.13	2	5	ND	3	3	1	2	2	9	.01	.005	2	2	.01	1	.01	2	.19	.01	.02	1	85
C 34554	10	51	2	4	.1	1	1	4	2.28	31	5	ND	3	5	1	2	2	16	.01	.003	2	2	.01	2	.01	2	.21	.01	.01	1	7
C 34555	5	14	2	1	.3	1	1	2	.22	2	5	ND	3	7	1	2	2	5	.01	.002	2	1	.01	1	.01	2	.20	.01	.01	1	46
C 34556	205	435	24	9	.1	2	5	7	7.56	529	5	ND	4	6	1	2	3	31	.01	.007	2	6	.01	1	.01	8	.18	.01	.01	2	1205
STD C/AU-R	19	62	40	132	6.7	70	31	1048	4.05	42	23	8	41	49	19	16	20	61	.47	.095	42	57	.93	176	.07	41	1.99	.06	.16	13	520

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: DEC 11 1988 DATE REPORT MAILED: Dec 15/88 SIGNED BY. C. Leong ..D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT EXPO File # 88-6230

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 33001	1	133	15	92	.1	13	14	327	5.44	2	5	ND	1	63	1	2	2	166	.69	.057	10	18	1.88	104	.25	2	4.22	.07	.03	1	2
C 33002	3	52	11	7	.1	2	4	59	2.69	4	5	ND	2	11	1	2	2	21	.04	.032	11	4	.08	118	.06	5	1.04	.01	.15	1	19
C 33003	22	112	2	11	.1	1	4	28	6.49	98	5	ND	1	7	1	2	6	10	.02	.003	2	7	.04	445	.01	2	.17	.01	.01	3	8
C 33004	4	94	26	5	.2	1	4	9	4.69	14	5	ND	1	18	1	2	18	11	.14	.004	2	2	.01	10	.01	2	.29	.01	.04	1	2
C 33005	6	42	17	7	.5	3	11	9	5.00	10	5	ND	1	2	1	2	2	10	.01	.001	2	5	.01	12	.01	2	.29	.01	.01	1	1
C 33006	21	59	9	12	.1	4	6	12	8.87	13	5	ND	1	10	1	2	2	87	.01	.021	2	9	.04	92	.01	2	.30	.01	.01	2	1
C 33007	3	72	27	7	.1	3	8	2	8.00	25	5	ND	2	37	1	4	6	83	.01	.089	2	7	.01	185	.01	2	.56	.01	.05	1	3
C 33008	2	77	5	51	.1	8	8	449	3.74	11	5	ND	1	69	1	2	2	60	1.14	.036	3	10	1.21	68	.35	2	3.03	.03	.11	1	12
C 33009	1	59	36	114	.5	14	10	713	6.15	24	5	ND	1	86	1	3	2	65	1.74	.067	2	23	2.36	24	.21	3	5.21	.03	.06	5	18
C 33010	1	80	25	92	.3	94	44	1071	4.84	12	5	ND	1	69	2	2	2	98	.36	.051	4	65	2.36	104	.25	2	5.42	.04	.02	1	1
C 33011	3	27	13	30	.3	7	10	363	2.85	8	5	ND	1	52	1	3	2	30	1.44	.029	3	5	.79	29	.05	2	2.99	.01	.09	2	2
C 33012	1	18	4	21	.1	4	5	233	1.85	3	5	ND	6	33	1	2	2	31	.90	.025	6	4	.42	25	.05	2	1.44	.02	.07	1	1
C 33013	9	19	115	305	.9	1	7	394	1.91	19	5	ND	1	39	2	2	5	11	1.84	.042	6	3	.29	67	.05	2	2.01	.01	.13	1	6
C 33014	24	26	8	47	.6	8	14	388	4.28	46	5	ND	1	10	1	2	2	38	.39	.076	6	4	.38	26	.04	3	.93	.02	.11	1	10
C 33015	3	31	13	13	.3	3	3	36	2.64	3	5	ND	1	5	1	2	2	4	.05	.002	2	4	.03	192	.01	3	.36	.01	.01	1	1
C 33016	6	12	15	4	.1	3	1	20	.65	2	5	ND	1	4	1	2	2	3	.02	.005	2	5	.01	66	.01	2	.25	.01	.01	1	1
C 33017	1	30	12	51	.1	5	11	802	4.08	66	5	ND	2	92	1	2	2	72	4.75	.072	7	4	1.68	28	.11	6	4.21	.03	.08	2	5
C 33018	1	9	6	1	.1	1	1	24	.21	3	5	ND	1	12	1	2	2	3	.11	.002	2	2	.03	8	.01	3	.64	.01	.01	1	1
C 33019	2	47	10	60	.3	9	14	1246	4.50	3	5	ND	1	71	1	2	2	93	3.54	.055	7	4	.97	61	.18	2	2.59	.05	.06	1	6
C 33020	1	28	6	29	.1	1	8	446	7.81	7	5	ND	2	4	1	2	2	98	.10	.064	2	2	.55	44	.28	2	1.44	.02	.10	1	1
C 33021	1	40	11	67	.1	5	25	1053	5.84	2	5	ND	1	90	1	2	2	201	1.84	.071	11	7	1.80	107	.24	4	4.04	.10	.04	1	1
C 33022	3	51	10	68	.1	15	17	578	5.67	7	5	ND	2	66	1	3	2	99	3.49	.061	10	22	2.58	10	.01	2	3.44	.02	.05	1	1
C 34542	1	41	11	54	.1	39	12	373	6.17	18	5	ND	2	4	1	2	2	96	.06	.017	4	67	.81	72	.01	2	2.14	.01	.09	1	2
C 34543	8	34	2	7	.2	12	11	15	7.14	13	5	ND	1	2	1	2	2	32	.01	.001	2	23	.01	25	.01	2	.59	.01	.01	1	4
C 34544	3	42	9	47	.1	5	10	634	4.85	2	5	ND	1	5	1	2	2	43	.28	.078	8	12	1.01	56	.16	2	1.51	.01	.12	1	2
C 34545	2	60	10	40	.1	19	13	415	5.38	6	5	ND	2	24	1	2	2	104	.38	.055	7	39	.94	127	.19	4	2.38	.02	.06	1	1
C 34546	80	1509	2	11	.1	6	17	26	4.43	7	5	ND	1	1	1	2	2	9	.01	.001	2	8	.04	10	.01	3	.50	.01	.05	1	290
C 34547	44	1374	8	23	.1	2	11	7	26.54	17	5	ND	7	1	3	2	2	134	.01	.071	2	6	.01	50	.02	2	.47	.01	.06	1	45
C 34548	8	595	9	34	.1	3	10	157	19.88	31	5	ND	4	11	2	2	2	128	.05	.097	2	12	.31	41	.18	2	1.25	.02	.05	2	13
C 34549	117	581	2	4	.3	5	5	17	3.27	8	5	ND	1	6	1	2	2	12	.01	.006	2	4	.02	58	.01	3	.32	.01	.05	1	440
C 34550	15	157	6	40	.1	4	11	442	6.45	4	5	ND	1	65	2	2	2	94	.23	.035	4	9	.88	152	.16	2	2.46	.03	.04	1	22
B 41501	164	127	13	3	.1	3	3	23	2.28	8	5	ND	9	47	1	2	2	8	.01	.029	4	7	.09	83	.01	5	.46	.01	.10	1	63
B 41502	78	403	2	4	.1	5	2	18	1.31	2	5	ND	1	2	1	2	2	5	.01	.004	2	36	.02	8	.01	5	.15	.01	.04	1	192
STD C/AU-R	19	63	37	132	6.7	70	31	1040	4.14	42	18	8	38	48	19	16	22	61	.50	.094	40	55	.98	175	.07	32	2.05	.06	.13	12	510

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: JAN 16 1989
DATE REPORT MAILED: Jan. 19/89.

GEOCHEMICAL ANALYSIS CERTIFICATE

- SAMPLE TYPE: ROCK
AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY. C. Leong. D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT EXPO FILE # 89-0098

SAMPLE#	AU* ppb
B 41551	3
B 41552	1
B 41553	2
B 41554	45
B 41555	1
B 41556	2
B 41557	5

ACME ANALYTICAL LABORATORIES LTD.
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DATE RECEIVED: NOV 25 1988
DATE REPORT MAILED: Dec. 1/88

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Core AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY..... D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT MORAGA RES./EXPO FILE # 88-6013 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34557	9	1000	28	107	.1	46
C 34558	5	394	24	116	.1	32
C 34559	3	427	31	105	.1	45
C 34560	10	1015	23	94	.2	53
C 34561	19	709	18	82	.1	33
C 34562	40	811	20	71	.1	52
C 34563	15	428	21	74	.1	16
C 34564	9	636	24	87	.1	32
C 34565	2	290	19	92	.1	14
C 34566	7	291	22	68	.1	18
C 34567	20	570	32	91	.1	31
C 34568	7	409	14	51	.1	35
C 34569	8	478	20	80	.2	32
C 34570	16	502	32	94	.2	21
C 34571	5	177	20	87	.1	10
C 34572	26	258	16	67	.1	8
C 34573	8	420	23	84	.1	22
C 34574	39	578	13	53	.1	9
C 34575	11	498	19	66	.1	15
C 34576	6	280	23	87	.1	24
C 34577	8	517	14	48	.1	32
C 34578	4	288	24	52	.1	13
C 34579	7	108	13	38	.2	6
C 34580	6	184	17	47	.1	5
C 34581	2	183	15	43	.1	2
C 34582	5	198	18	57	.1	11
C 34583	1	129	20	47	.1	5
C 34584	1	117	11	36	.1	7
C 34585	51	107	8	34	.1	6
C 34586	6	83	13	44	.1	3
C 34587	1	97	17	41	.1	6
C 34588	5	149	9	46	.1	5
C 34589	1	51	9	34	.1	1
C 34590	1	129	16	34	.1	3
C 34591	1	102	14	42	.1	1
C 34592	2	100	13	23	.2	4
STD C/AU-R	19	63	43	132	6.9	480

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34593	3	177	6	38	.1	8
C 34594	136	1135	10	52	.1	15
C 34595	7	267	10	44	.2	9
C 34596	1	158	34	63	.1	12
C 34597	1	138	17	37	.1	6
C 34598	9	153	19	31	.1	9
C 34599	26	627	28	38	.1	28
C 34600	2	81	15	31	.1	8
C 34601	1	99	6	32	.1	7
C 34602	2	217	6	23	.1	5
C 34603	1	24	5	30	.1	1
C 34604	1	26	18	29	.1	1
C 34605	4	51	11	36	.1	2
C 34606	3	26	17	36	.1	9
C 34607	11	141	16	56	.1	12
C 34608	1	191	21	41	.1	8
C 34609	1	95	14	41	.1	6
C 34610	1	35	8	31	.1	2
C 34611	1	88	16	36	.2	7
C 34612	1	14	18	23	.1	2
C 34613	1	41	9	30	.1	1
C 34614	1	79	13	30	.1	11
C 34615	1	57	12	31	.1	2
C 34616	1	90	9	26	.1	8
C 34617	3	56	9	31	.3	1
C 34618	1	75	8	27	.2	3
C 34619	4	95	5	25	.1	4
C 34620	1	132	17	24	.2	2
C 34621	2	86	8	31	.1	3
C 34622	1	53	6	23	.1	4
C 34623	1	113	8	28	.1	4
C 34624	1	77	6	26	.2	6
C 34625	1	38	9	24	.1	1
C 34626	1	24	11	27	.1	2
C 34627	1	45	14	34	.1	1
C 34628	2	151	8	31	.1	8
STD C/AU-R	19	60	37	137	7.4	490

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34629	2	16	14	19	.1	9
C 34630	2	23	14	19	.1	3
C 34631	1	63	24	29	.1	2
C 34632	2	58	19	21	.2	12
C 34633	1	103	22	31	.1	11
C 34634	1	82	18	53	.1	3
C 34635	1	56	15	21	.1	7
C 34636	2	53	19	24	.1	6
C 34637	4	77	20	25	.1	3
C 34638	1	81	11	26	.1	30
C 34639	3	63	12	29	.5	6
C 34640	3	39	15	23	.1	3
C 34641	3	43	20	24	.2	4
C 34642	1	75	12	25	.4	9

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ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: NOV 28 1988
DATE REPORT MAILED: Dec. 1/88

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Core AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY. . . . . D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT-MORAGA RES/EXPO FILE # 88-6042 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34643	1	27	9	21	.1	9
C 34644	1	174	12	22	.1	14
C 34645	1	72	11	13	.2	3
C 34646	1	108	7	12	.1	3
C 34647	1	100	6	17	.4	3
C 34648	40	2859	28	141	.6	330
C 34649	61	3713	21	105	.8	410
C 34650	40	1923	17	86	.5	225
C 34651	31	2517	26	132	.5	290
C 34652	37	2197	21	116	.5	260
C 34653	43	1902	15	83	.5	86
C 34654	22	1226	16	123	.4	117
C 34655	34	1367	13	82	.5	116
C 34656	22	1140	9	107	.4	101
C 34657	29	2005	17	133	.6	114
C 34658	24	1239	11	122	.3	86
C 34659	36	2312	32	146	.8	76
C 34660	20	1115	13	141	.4	91
C 34661	19	1508	29	99	.7	61
C 34662	24	1972	15	106	.7	66
C 34663	27	1517	21	117	.6	68
C 34664	27	1305	21	111	.5	74
C 34665	21	1358	21	150	.5	49
C 34666	12	1077	16	109	.5	74
C 34667	23	1186	11	92	.3	98
C 34668	18	1572	13	128	.5	29
C 34669	12	731	9	70	.2	44
C 34670	25	1416	14	89	.4	87
C 34671	15	1176	11	65	.3	94
C 34672	14	548	8	93	.3	32
C 34673	9	670	20	75	.2	34
C 34674	8	660	19	67	.1	47
C 34675	23	5037	22	184	2.2	690
C 34676	21	5067	23	199	2.2	720
C 34677	24	5021	36	282	2.0	750
C 34678	20	2841	37	234	1.0	365

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34679	20	2967	28	162	.7	410
C 34680	13	2239	26	148	.7	390
C 34681	19	2533	24	156	.7	400
C 34682	24	2605	21	143	.7	430
C 34683	28	3426	23	146	1.0	380
C 34684	17	2964	29	156	1.0	410
C 34685	20	2376	31	119	.7	290
C 34686	35	3024	23	157	.8	330
C 34687	30	2308	10	126	.6	290
C 34688	8	1667	8	55	.7	610
C 34689	18	3072	35	153	1.2	600
C 34690	15	1994	19	129	.6	310
C 34691	27	3611	26	206	1.7	510
C 34692	53	2028	33	328	.9	320
C 34693	18	2882	28	212	.9	490
C 34694	21	3004	23	189	.8	540
C 34695	17	3847	17	120	1.0	770
C 34696	142	5063	28	170	1.2	810
C 34697	38	3760	13	130	1.1	620
STD C/AU-R	18	59	37	133	6.9	470

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DATE RECEIVED: DEC 1 1988
DATE REPORT MAILED: Dec. 2/88

GEOCHEMICAL ANALYSIS CERTIFICATE

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SIGNED BY. C. Leong. D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT MORAGA RES. - EXPO FILE # 88-6109 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34698	32	3882	2	125	1.0	650
C 34699	31	2419	15	155	.8	370
C 34700	30	2854	26	312	1.3	450
C 34701	21	2706	5	150	.8	280
C 34702	20	2315	8	125	.7	240
C 34703	17	1656	15	122	.6	260
C 34704	33	3062	8	193	1.1	270
C 34705	38	2502	13	146	1.1	240
C 34706	30	3103	17	177	1.5	220
C 34707	108	2523	12	80	1.0	180
C 34708	30	2189	24	215	.8	108
C 34709	18	2327	14	107	.5	145
C 34710	190	2675	21	56	.9	135
C 34711	26	1793	10	148	.5	125
C 34712	48	2235	18	123	.6	166
C 34713	31	2605	13	168	1.0	167
C 34714	141	2447	19	153	.8	103
C 34715	65	2711	24	201	1.0	159
C 34716	23	2071	12	126	.7	144
C 34717	18	3349	16	120	.9	490
C 34718	61	3321	8	132	1.5	280
C 34719	25	1629	6	134	.3	112
C 34720	19	1673	13	116	.5	113
C 34721	35	2442	4	84	.5	210
C 34722	127	2888	12	124	.6	250
C 34723	125	3134	5	72	.6	270
C 34724	156	9330	10	113	1.5	910
C 34725	84	4350	10	128	.9	380
C 34726	41	3999	11	129	1.0	390
C 34727	53	4435	8	95	1.2	440
C 34728	99	3007	2	79	.7	270
C 34729	57	3198	5	197	.8	125
C 34730	43	2809	2	59	.4	184
C 34731	41	1602	7	60	.3	109
C 34732	28	862	21	115	.4	52
C 34733	9	201	16	68	.2	11
STD C/AU-R	19	63	41	141	7.3	530

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34734	8	201	6	71	.1	12
C 34735	4	179	9	60	.1	14
C 34736	3	220	16	42	.1	21
C 34737	28	2603	11	32	.1	67
C 34738	18	386	12	53	.2	13
C 34739	36	79	8	30	.3	17
C 34740	9	249	6	50	.1	10
C 34741	6	172	3	60	.1	13
C 34742	7	192	9	52	.1	26
C 34743	9	315	8	50	.1	16
C 34744	11	127	17	26	.1	18
STD C/AU-R	18	58	39	128	7.1	485

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DATE RECEIVED: DEC 7 1988
DATE REPORT MAILED: Dec. 12/88.

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SIGNED BY. C. Leong D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT MORAGA RES.-EXPO FILE # 88-6181 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34745	6	106	6	30	.2	3
C 34746	6	93	11	33	.1	5
C 34747	11	186	10	26	.1	4
C 34748	17	219	5	32	.4	10
C 34749	9	99	6	24	.1	2
C 34750	2	73	5	23	.1	9
C 34751	3	91	11	36	.7	2
C 34752	1	68	8	32	.1	31
C 34753	2	46	8	28	.7	1
C 34754	1	88	8	35	.4	5
C 34755	1	44	5	26	.1	1
C 34756	5	44	7	25	.6	4
C 34757	5	35	5	19	.2	7
C 34758	33	1609	14	98	.8	154
C 34759	18	2326	18	101	1.0	270
C 34760	15	1384	21	94	.6	108
C 34761	12	955	19	91	.9	77
C 34762	13	1365	26	95	1.0	129
C 34763	15	1281	21	174	1.0	105
C 34764	15	1589	23	98	.8	152
C 34765	18	1909	22	148	.4	126
C 34766	31	996	21	89	.1	24
C 34767	10	806	22	102	.5	61
C 34768	7	586	24	94	.4	43
C 34769	6	573	23	73	.7	53
C 34770	14	834	18	93	.5	72
C 34771	20	1027	35	106	.5	107
C 34772	13	1319	20	96	.2	102
C 34773	59	3595	18	122	2.0	78
C 34774	26	1429	29	211	1.3	81
C 34775	18	1807	19	154	.8	200
C 34776	14	1400	17	149	.7	109
C 34777	10	1095	19	119	1.0	97
C 34778	29	1362	61	282	1.7	36
C 34779	15	1413	21	131	1.5	95
C 34780	24	1659	44	166	1.8	53
STD C/AU-R	19	60	41	134	7.4	490

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34781	68	1487	18	123	1.0	31
C 34782	136	2557	26	134	1.5	105
C 34783	34	2097	20	170	.6	142
C 34784	31	1694	26	100	.6	132
C 34785	15	1268	21	86	.5	90
C 34786	12	2064	13	72	.7	210
C 34787	17	1375	16	68	.4	120
C 34788	75	1675	17	98	.7	129
C 34789	17	1832	18	82	.6	197
C 34790	19	1686	13	115	.6	125
C 34791	17	1265	14	244	.5	84
C 34792	22	1744	22	115	.8	132
C 34793	13	3360	14	111	.7	480
C 34794	28	2101	19	99	.5	127
C 34795	20	1375	10	56	.4	84
C 34796	28	2161	11	81	.4	177
C 34797	36	2290	16	90	.5	195
C 34798	33	2518	23	95	.5	120
C 34799	119	4898	29	97	1.1	320
C 34800	68	2836	19	75	.7	210
C 34801	45	2777	15	81	.7	174
C 34802	167	1100	16	48	.4	116
C 34803	50	936	8	48	.3	32
C 34804	29	784	14	38	.2	27
C 34805	27	949	11	36	.3	57
C 34806	26	564	14	36	.3	19
C 34807	29	561	11	47	.2	17
C 34808	107	969	13	33	.2	38
C 34809	5	288	15	33	.2	7
C 34810	12	384	12	30	.3	167
C 34811	15	549	20	45	.4	29
C 34812	13	1102	15	69	.4	26
C 34813	10	634	11	48	.2	19
C 34814	14	966	17	50	.4	35
C 34815	26	899	12	34	.5	24
C 34816	10	1003	19	40	.5	41
STD C/AU-R	19	61	40	133	6.8	520

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34817	114	2406	4	41	.6	87
C 34818	36	923	8	43	.4	23
C 34819	35	1469	11	50	.4	53
C 34820	25	885	2	49	.4	22
C 34821	29	1005	5	57	.2	58
C 34822	72	864	8	57	.4	16
C 34823	38	678	7	63	.3	31
C 34824	40	390	7	51	.2	5
C 34825	40	745	12	65	.4	8
C 34826	32	861	12	54	.5	17
C 34827	44	1252	8	55	.6	14
C 34828	32	1646	6	44	1.1	8
C 34829	64	1430	2	46	.8	15
C 34830	22	834	8	50	.6	6
C 34831	49	261	8	34	.2	4
C 34832	196	633	4	51	.3	17
C 34833	65	1911	8	42	.5	59
C 34834	30	930	16	55	.3	28
C 34835	56	3484	2	47	.8	220
C 34836	80	1286	3	41	.5	76
C 34837	56	1353	9	41	.5	49
C 34838	57	766	7	47	.4	16
C 34839	16	586	9	37	.3	14
C 34840	34	816	9	42	.5	23
C 34841	16	280	2	41	.1	15
C 34842	47	284	8	38	.2	18
C 34843	30	326	25	48	.2	10
C 34844	1	152	10	32	.3	12
C 34845	3	124	5	29	.3	10
C 34846	3	153	10	30	.2	14
C 34847	49	257	2	41	.2	21
C 34848	3	70	5	21	.3	8
C 34849	1	51	6	24	.3	10
C 34850	1	78	4	24	.1	15
C 34851	8	227	278	378	.4	20
C 34852	3	119	17	42	.2	7
STD C/AU-R	19	62	42	132	7.0	490

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au* PPB
C 34853	7	175	21	33	.1	14
C 34854	24	646	39	53	.3	36
C 34855	8	321	23	116	.1	34
C 34856	20	3054	16	231	.4	370
C 34857	11	1780	14	224	.1	260
C 34858	4	395	29	120	.1	37
C 34859	3	140	7	73	.1	10
C 34860	19	1927	17	200	.4	310
C 34861	29	4648	14	194	1.1	430
STD C/AU-R	18	61	43	132	6.8	525

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: DEC 12 1988

DATE REPORT MAILED: Dec. 15/88

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU** BY FIRE ASSAY FROM 1/2 A.T.

SIGNED BY. C. Leong. D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. PROJECT MORAGA RES. - EXPO FILE # 88-6109R

SAMPLE#	Cu %	Au** OZ/T
C 34698	.51	.017
C 34699	.27	.009
C 34700	.32	.012
C 34701	.29	.008
C 34702	.25	.007
C 34723	.32	.008
C 34724	.97	.027
C 34725	.47	.010
C 34726	.46	.012
C 34727	.48	.011

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DATE RECEIVED: DEC 12 1988

DATE REPORT MAILED: Dec. 15/88

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU** BY FIRE ASSAY FROM 1/2 A.T.

SIGNED BY..... D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

DAIWAN ENGINEERING LTD. FILE # 88-6042R

SAMPLE#	Cu %	Au** OZ/T
C 34648	.30	.009
C 34649	.39	.011
C 34650	.21	.006
C 34651	.27	.007
C 34652	.24	.007
C 34675	.56	.018
C 34676	.58	.018
C 34677	.55	.020
C 34678	.34	.009

APPENDIX 4

DRILL LOGS

HOLE NO.: NF-88-1 | PROJECT: Moraga Res. - Expl. | PAGE NO.: 1 of 10 | EC-159

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: Nov 12/88 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: Nov 16/88 | SCALE:

INCLINATION: -60 | BEARING: 007 | TOTAL DEPTH: 274.32 m | LOGGED BY: GDH.

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
12.19					OVERBURDEN 0-12.19		Approx										
13		MOD			12.19-30.6 ANDESITE PORPHYRY - 1% PHENO ≤ 5mm (15-20%) GREENISH-GREY to ONNISH GREY. MAFIC PHENO. ALT TO CHLORITE. WEAKLY to MOD. SILICIFICATION w LATER WEAK ARG ALT SURROUNDING QTZ FILLED FRACTURES GENERALLY @ 20° AND UNMINERALIZED. (64mm LOCAL Py DIS. TO 5% OCCASIONALLY ASSOCIATED w HAIRLINE QTZ. AT VARIOUS ANGLES. VERY OCCASSIONAL CALCITE w QTZ.		46	5.0	90	345578	2.81	9	1000	28	107	0.1
14					QTZ HEALED BRECCIA & 10cm. Py 2-5%												
15										345579	3.0						
16					PHENO ≤ 3mm 5-10%. GENERALLY Rx MORE SILICEOUS.		32					5	394	24	116	0.1	
17																	
18								5.7	84								
19										345580	3.0						
20							45					3	427	31	105	0.1	
21																	
22										345581	3.0						
23							53					10	1015	23	94	0.2	

HOLE NO.: HEBB-1 | PROJECT: | PAGE NO.: 2 of 10

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

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

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

SECTION	ALTERATION: CLAY	ALTERATION: SILICIFICATION	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES As ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT. Mo	ESTIMATED ppm Cu	Pb	Zn	Hg
24						CONTACT @ 60°. FOOT WALL PYRITE ≤ 5% AND GENERALLY SMALLER.										
25							33	5.7	86	34561	3.0	19	709	18	82	0.1
26																
27						QTZ HEALED BRECCIA FOLLOWED BY GOUGE											
28						TUFF - SILICEOUS FRAG. TUFF to MOD CLAY ALT. (FINE BRECCIA?). CONTACTS @ 30°	52			34562	3.0	40	811	20	71	0.1
29																
30						NETWORK OF QTZ STRINGERS WEAKLY CALCITIC.										
31							16	4.4	93	34563	3.0	15	428	21	74	0.1
32						MAGNESITE? 5-10°										
33																
34																
35						PYRRHOTITE.	32	6.7	71	34564	3.0	9	636	24	87	0.1
36																
37						QTZ VEIN 20cm @ 40°. CALCITE IN TENSION FRACTURES ⊥ VEIN.											
38						ANDESITE? fg GLASSY. ARRIVARS GRADATIONAL.	14			34565	3.0	2	290	19	92	0.1
39						TUFF? fg PINKISH-GREY FRAG ≤ 2mm										
40						Rx fg GREY SILICEOUS. MINOR CHLORITE ALTN.										
41							18	5.6	89	34566	3.0	7	291	22	68	0.1
42																
43							31			34567	3.0	20	570	32	91	0.1
44																
45						GOUGE 2cm @ 30°										
46							35	5.4	89	34568	3.0	7	409	14	51	0.1
47																
48						FRAGMENT SUPPORTED GOUGE DIS Py ≤ 10% (OCC. EUHEDRAL)											
49						LOW + HIGH ANGLE QTZ. STRINGERS ∓ SULPHIDES SIMILAR TO WALL Rx.	32			34569	3.0	8	478	20	80	0.2
50																
51						10 mm QTZ VEIN. Py 10-15% @ 30°. PYRALUSITE FLECKS (BORNITE?) CUT BY CALCITIC STRINGERS.											
52						QTZ VEIN 2-5mm Py 5%	21			34570	3.0	16	562	32	94	0.2

30.6 - 58.35 ANDESITE fg. REDDISH GREY LOCALLY PORPHYRITIC (CHLORITIZED) QTZ-CARB FRACTURES COMMON. 20-60° ≤ 4mm. OCCASSIONAL VEINING COMPLETELY CALCITE. ∓ NO PREFERRED ORIENTATION. SIMILAR TO 12.19-20.6 CLAY ALTERATION OF A GENERALLY SILICEOUS Rx HAS TAKEN PLACE AROUND QTZ AND QTZ-CARB VEINLETS. Py VARIES LOCALLY ≤ 5%. AND IS DISSEMINATED ∓ OCCASSIONAL CONCENTRATIONS ON FRACTURE SURFACES. OCCASSIONAL SALT (2.5-4.0) VEIN MATERIAL DOES NOT EFFERVESCE (MAGNESITE?)

HOLE NO.: HP-88-1 | PROJECT: | PAGE NO.: 3 OF 10

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

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

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

ALTERATION: CLAY | SILICIFICATION | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

NOTE: 53.40 - 58.35 POSSIBLE TUFF fine-med gr VERY SILICEOUS.

58.35 - 83.0 BRECCIA. MOD - HIGH SILICIFICATION. FRAG ± 10mm COMPRISE ≈ 20% OF RX SET IN fg. MATRIX, ANGULAR TO SUB-ROUNDED. DIS. Py 0.5 - 1% LOCALLY.

53 VUGGY QTZ VEIN @ 60° ≤ 5mm DRUSSY QTZ. Py 5%

54 QTZ-CARB @ 45° 10mm LAMINATED W WALL RX MINOR VUG W DRUSSY QTZ. MASSIVE Py 20%. ABOVE WK GOUGE 20mm HIGH ANGLE LAMINATED VEIN

55 59.70 - 64.0 SHEAR @ 10-15° LOCAL CALCITE. Py DIS. ± 1%. SLICKENSIDES. TRACE Mn STAIN.

56

57

58

59

60

61

62

63

64

65

66 FRAG ≤ 50mm. SUB-ANGULAR TO SUB-ROUNDED fg DARK SILICEOUS MATRIX. DISS. Py 2-3%

67

68 CALCITE FRACTURE ≤ 2mm @ 10°

69 QTZ VEIN ≤ 4mm @ 80° Py 10%.

70

71

72 DYKE. fg EQTR. MOD SILICEOUS. DK GREEN. POSS CHLORITE ALT. LOWER CONTACT @ 50°

73

74 WEAK SHEARING W MINOR GOUGE ALONG SURFACES. QTZ-CARB VEINS @ 20-30° VUGGY.

75

76 QTZ-CARB VEIN 10mm @ 20° LAMINATED. VUG W ACICULAR WHITE ZEOLITE.

77

78 WEAK FRACTURING @ 10-20° W IRREGULAR QTZ, QTZ-CARB AND ZEOLITE FILLING. VUGGY. Py STRINGERS DEC. MASSIVE.

79

80 10 cm GOUGE

81 IRREGULAR SILICIFIED MATRIX SIMILAR TO PORPHYRITIC UNITS.

82 10cm WELL FRACTURED TO MASSIVE

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
53	Approx				3.0						
54		5.1	88	345#0							
55	10			345#1	3.0	5	177	20	87	0.1
56											
57											
58	8	5.0	98	34572	3.0	26	258	16	67	0.1
59											
60											
61	22			345#3	3.0	8	420	23	84	0.1
62											
63		5.6	89								
64											
65	9			345#4	3.0	39	578	13	53	0.1
66											
67	15			345#5	3.0	11	498	19	66	0.1
68		5.5	84								
69											
70	24			345#6	3.0	6	280	23	27	0.1
71											
72											
73	32	5.3	87	345#7	3.0	8	517	14	48	0.1
74											
75											
76	13			34678	3.0	4	288	24	52	0.1
77											
78											
79	6	5.7	88	34579	3.0	7	108	13	38	0.2
80											
81											
82	5			34580	3.0	6	154	13	42	0.1

HOLE NO.: HF 88-1 | PROJECT: | PAGE NO.: 4 OF 10

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

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

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

ALTERATION: CCAY, SIL. | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

SECTION	Au ppb	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM Mo	Cu	Pb	Zn	Ag
83					34580	3.0						
84												
85	2		5.0	92	34581	3.0	2	183	15		43	0.1
86												
87												
88	11		5.9	60	34582	3.0	5	198	18		67	0.1
89												
90												
91	5				34583	3.0	1	129	20		47	0.1
92												
93	7		1.9	39	34584	3.0	1	117	11		36	0.1
94												
95												
96	6				34585	3.0	51	107	8		34	0.1
97												
98												
99												
100	3				34586	2.7	6	83	13		44	0.1
101												
102												
103	6		5.6	91	34587	3.2	1	97	17		41	0.1
104												
105												
106	5				34588	3.1	5	149	9		46	0.1
107												
108												
109	1		5.4	98	34589	3.0	1	51	9		34	0.1
110												
111												
112	3				34590	3.0	1	109	4		24	0.1

82.0 - 83.0 MOTTLED PINK, GREEN AND BUFF. SKARN? 1-2% Py GENERALLY SURROUNDED BY CHLORITE

84.1 - 83.6 WEAK TO MOD. CLAY ALTERATION. DIS BY 3-5% DARK HAIRLINE STRINGERS

QTZ-CARB. VUGGY @ 15° 5-40°

QTZ-CARB. 5mm @ 30°

WHITE VEIN (MAGNESITE?) @ 20° SLIGHTLY VUGGY & ACICULAR XSTAL.

FAULT. CORE SHATTERED. DIS Py ≤ 3% (SOME EUHEDRAL) WEAK CLAY ALT.

CONTACT @ 40°

WEAK BRECCIA QTZ HEALED. MINOR CALCITE.

Py VEIN 2-3mm @ 15° PALE GREEN PYROPHYLLITE ALT

QTZ-CARB VEIN @ 40° ≤ 25mm VUGGY

WEAK TO MODERATE VUGGY

83.0 - 93.0 Rx IS GENERALLY MED. GREY AND Fg. VERY SILICEOUS. ANDESITE APPEARS WEAKLY BRECCIATED. Rx IS COMPETENT BUT EXHIBITS NUMEROUS HAIRLINE FRACTURES.

93.0 - 101.9 - Rx (ANDESITE?) Fg. LIGHT TO MED. GREY. EXTREMELY SILICEOUS. ANGULAR BRECCIA QTZ HEALED DIS Py < 1.5%. OCCASIONAL ROUNDED DARK GREEN CHLORITE ALT.

101.9 - 104.9 - QTZ-FELD PORPHYRY(?) PHENO ≤ 5mm AND MORE NUMEROUS TOWARDS TOP. BOUNDARIES OF PHENO GENERALLY DIFFUSE. DIS Py 2-3%. HAIRLINE QTZ FILLED FRACTURE CONTACTS INDISTINCT.

104.9 - 114.0 ANDESITE TUFF(?) BUFF TO GREEN. FINE to MEDIUM GRAINED. FRAG ≤ 2mm DIS Py 2%. SCATTERED GREEN CHLORITIC ALT. PYRITE STRINGERS OCCASIONAL

HOLE NO.: HF88-1 | PROJECT: | PAGE NO.: 5 OF 10

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

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

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

ALTERATION: CLAY, SILICA | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

QTZ-CARB VEIN ≤ 3m @ 10°

QTZ VEIN ≤ 8m @ 10°. Py 10% CONCENTRATED ALONG CENTRE OF VEIN

QTZ-CARB VEIN ≤ 3mm @ 40° CUTS IRREGULAR PATCH OF QTZ-Py AND IS ITSELF OFFSET 1cm FRACTURES.

117.04-117.3 - WK-MOD. GOUGE.

FRACTURES @ 10-20° WK-MOD GOUGE.

HIGH ANGLE CROSS MATCH OF CARB-QTZ VEINS AND STRINGERS.

GOUGE 10mm @ 40°

DIS Py 10-15%

VUGGY QTZ-CARB VEINS @ 10-20°

Py 5% OVER 10CM.

ROMM MINOR GOUGE

SLICKENSIDES @ 80°

HIGH ANGLE CROSS MATCH OF QTZ AND QTZ-CARB STRINGERS.

QTZ-FELD PORPHYRY W FELSITIZED WALL Py. UPPER CONTACT @ 40°

114.0 - 129.9 — ANDESITE BRECCIA. Fg. LIGHT GREY TO MED. GREY SILICEOUS TO VERY SILICEOUS. Py DIS AND IN BLEBS ≤ 4%. QTZ VEINS W Py COMMON. QTZ-CARB STRINGERS CUT THE MINERALIZED QTZ VEINS BUT GENERALLY ARE NOT MINERALIZED THEMSELVES.

116.5 - 129.9 CORE MODERATELY SILICEOUS. EXHIBITS MORE CLAY.

121.0 - 129.9 CORE EXHIBITS ANGULAR FRACTURING FILLED W HAIRLINE STRINGERS AND IRREGULAR PATCHES OF CARB-QTZ. VEINING IS GENERALLY UNMINERALIZED ALTHOUGH Py HAS ≤ 2% DIS Py. OCCASSIONAL GOUGE ZONES ≤ 10mm.

129.9 - 134.7 TUFF. MOTTLED COLOUR GENERALLY BUFF TO PINKISH MODERATELY SILICEOUS. FRAG ≤ 3mm. CONTACTS INDISTINCT. Py 1-2% LOCALLY 5-10% RELOCATED W FRACTURES RATHER THAN DIS. Pf LIGHTLY FRACTURED W GREY-MILKY QTZ FILLING.

134.7 - 147.2 ANDESITE Fg. MOD TO VERY SILICEOUS. Pf SHOWS WEAK TO MOD. GENERALLY HIGH-ANGLE FRACTURES. (5-15°) HEALED W QTZ AND QTZ-CARB. Py DIS 2-3% W LOCAL CONCENTRATIONS < 10% ALONG SOME FRACTURES. SCATTERED DARK GREEN BLEBS (CHLORITE?) ≤ 2mm

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
113	Au ppb										
114				34590	3.0						
115	1	5.7	93	34591	3.0	1	102	14	42	0.1
116											
117											
118	4			34592	3.0	2	100	13	23	0.2
119											
120		5.8	95								
121	8			34593	3.0	3	177	6	38	0.1
122											
123											
124	15			34594	3.0	136	1135	10	52	0.1
125											
126		5.4	100								
127	9			34596	3.0	7	267	10	44	0.2
128											
129											
130	12			34597	0.9	1	158	34	63	0.1
131											
132	6	5.6	93	34598	2.1	1	138	17	37	0.1
133	9			34599	2.7	9	153	19	31	0.1
134											
135											
136	28			34599	3.3	26	627	28	38	0.1
137		5.7	95								
138											
139	8			34600	3.0	2	81	15	31	0.1
140											
141											
142	7			34601	3.0	1	99	6	32	0.1
143											

HOLE NO.: HF 88-1 | PROJECT: | PAGE NO.: 6 OF 10

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

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

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

SECTION	ALTERATION (Carb, Silic)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT. Mo	ESTIMATED ppm Cu	Pb	Zn	Ag
143																
144					QTZ. VEIN 10-15CM @ 5-10° WEAKLY LAMINATED & IRREGULAR SOFT ALT. (CHLORITE). Py 3-5%.					34601	3.0					
145							5	5.6	88	34602	3.2	2	217	6	23	0.1
146																
147					WEAK 20 CM COUGE.											
148					147.2 - 160.1 TUFF (WELDED?). BUFF TO GREY Fg. MOD - STRONG SILICEOUS. FRAG ≤ 4mm. Dis Py 2-4% & LOCAL CONCENTRATIONS 15-20%. Rx WEAKLY TO MOD. FRACTURED W. CARB-QTZ FILLING.		1	5.5	98	34603	2.8	1	24	5	30	0.1
149																
150																
151																
152							1			34604	3.0	1	26	18	29	0.1
153					QTZ VEIN 5% Py CARB. @ 90° ≤ 3 mm.											
154							2	5.7	96	34605	3.0	4	51	11	36	0.1
155																
156																
157																
158					15CM. LAMINATED CARB-QTZ. @ 5-10° Py 5-10%		9			34606	3.0	3	26	17	36	0.1
159																
160					160.1 - 248.0 ANDESITE (POSSIBLY FRAGMENTAL/TUFF) DARK GREY. Fg. STRONGLY SILICEOUS. Dis Py 5-6%. & LOCAL CONCENTRATION ON FRACTURES CORE MOD. FRACTURED AND QTZ AND CARB-QTZ HEALED.		12	4.7	87	34607	1.1	11	141	16	56	0.1
161																
162							8			34608	2.9	1	191	21	41	0.1
163					BRECCIA QTZ-CARB HEALED.											
164					VEIN 10MM @ 10-20° SOFT (2.5-3.5) NO FIZZ. (MAGNESITE?)											
165							6	6.5	85	34609	3.0	1	95	14	41	0.1
166					QTZ-CARB VEIN 10CM @ 20° 1-2% Py.											
167																
168							2			34610	3.0	1	35	8	31	0.1
169																
170					Py STRINGERS 2-3MM @ 10°											
171							7	5.5	96	34611	3.0	1	89	16	36	0.2
172					CORE BROWN W. GREEN PATCHES.											
173																

HOLE NO.: HF-88-1. | PROJECT: | PAGE NO.: 7 of 10

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

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

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

SECTION	ALTERATION (DRAB / SILICA)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES (Py ppb.)	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
173																	
174					QTZ-CARB VEIN ≤15mm @ 5° Py 1% WEAK SLICKENSIDES AT WALL RY CONTACT W MINOR Mn STAIN.		2			34612	3.0	1	14	18	23	0.1
175																	
176																	
177					Py LESS SILICEOUS		1	5.1	94	34613	3.0	1	41	9	30	0.	
178																	
179					RY MOTTLED BROWN + PALE GREEN (BIOTITE/CHLORITE + EPIDOTE)		11			34614	3.0	1	79	13	30	0.1	
180																	
181																	
182																	
183							2	5.7	96	34615	3.0	1	57	12	31	0.1	
184					HEALED BRECCIA W 2-3mm QTZ-CARB VEIN @ 5°. MINOR WHITE ZEOLITE												
185																	
186					QTZ VEIN @ 40mm @ 15-20° Py 30-40%.		8			34616	3.0	1	90	9	26	0.1	
187																	
188					WK-MOD GOUGE. OCCASSIONAL QTZ BLEBS W 2-5% Py.		1	5.7	95	34617	3.0	3	56	9	31	0.3	
189					QTZ STRINGERS 1-2mm @ 10° 2-3% Py. BLEBS OF CALCITE.												
190																	
191					QTZ VEIN 2-5mm @ 5-10° W ANGULAR WALL RY.		3			34618	3.0	1	75	8	27	0.2	
192																	
193					CORE FRACTURED AND CALCITE HEALED.												
194							4	5.7	88	34619	3.0	4	95	5	25	0.1	
195					CORE SHATTERED W MINOR GOUGE.												
196																	
197					6cm BRECCIA CALCITE HEALED CROSSCUT BY 2mm QTZ VEIN @ 40°		2	5.5	87	34620	3.0	1	132	17	24	0.2	
198					IRREGULAR CARB-QTZ @ 5° W WK GOUGE.												
199																	
200					10 MM QTZ VEIN W 20% Py		3			34621	3.0	2	86	8	31	0.1	
201					IRREGULAR GRANULARLY HIGH ANGLE (45-15°) QTZ CARB VEIN WITH												
202																	

174.0 - 248.0 AMT. OF DIS. Py DECREASES TO 1-2% Py NOW CONCENTRATED IN STRINGERS. ANDESITE IS LIGHT TO MED. GREY. AND STRONGLY SILICEOUS. OCCASIONAL PINKISH COLOUR (FELD ALT)

HOLE NO.: HF 88-1 | PROJECT: | PAGE NO.: 8 OF 10

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

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

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

SECTION	ALTERATION (clay / sil / carb)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Aug/ph	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Cu	Pb	Zn	Ag
203																
204							4			34622	3.0	1	53	6	23	0.1
205								5.6	98							
206					QTZ-CARB VEIN @ 28° 10-15mm MINOR VUGS. 15-20% Py.		4			34623	3.0	1	113	8	28	0.1
207																
208																
209					QTZ HEALED FRACTURES 5-15°		6	5.5	98	34624	3.0	1	77	6	26	0.2
210					TUFFACEOUS?											
211																
212																
213							1			34625	3.0	1	38	9	24	0.1
214					QTZ VEIN (MINOR CARB) ≤5mm @ 5-15° WEAKLY LAMINATED) <1% Py. ZEOLITES IN VUG.											
215																
216							2	5.4	94	34626	3.0	1	24	11	27	0.1
217																
218																
219							1			34627	3.0	1	45	14	34	0.1
220																
221																
222							8	5.9	93	34628	3.0	2	161	8	31	0.1
223					INTRUSIVE FELD-QTZ DYKE. CONTACTS IRREGULAR @ 20-30°. CUT BY											
224					QTZ-CARB VEIN 55mm @ 5° to											
225					MINOR Py.		9			34629	3.0	2	16	14	19	0.1
226					QTZ VEIN 2-6mm @ 5-10° Py 60% Pr. 10% Cp 20%											
227					Py STRINGERS											
228					Py BLEBS + STRINGERS. 226.8-227.0'		3	5.5	98	34630	3.0	2	23	14	19	0.1
229																
230						230.0 - 248.0 - WEAK TO MODERATE LEACHING SURROUNDING VEINS AND FRACTURES.											
231					Py STRINGERS @ 15°		2	5.4	100	34631	3.0	1	63	24	29	0.1
232																
233					BRECCIA 30 1/0cm HEALED to											

HOLE NO.: HF88-1 | PROJECT: | PAGE NO.: 9 OF 10

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

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

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

SECTION	ALTERATION: CLAY	ALTERATION: SILICIFY	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM
													No.	Cu / Pb / Zn / Ag
233								Aᵉ ppb						
234						WK. BRECCIA - MOTTLED BUFF-GREEN FELD ALT. IRREGULAR QTZ & Py STRINGERS		12			34632	3.0	2	58 / 19 / 21 / 0.2
235						QTZ-CARB VEIN ≤8mm @ 20° VUGGY W/ MINOR WHITE EPIDOTE QTZ-VEIN 2-3cm @ 60°	239.0 - 248.0 CORE CONTAINS 1-2% DIS Py ≤ 1mm WITH SCATTERED BLEBS ≤ 5MM. OVERALL Py CONTENT 2-3%. CORE VERY SILICEOUS. LOCALLY MAGNETIC	11	5.4	98	34633	3.0	1	103 / 22 / 31 / 0.1
236														
237														
238						WELL FRACTURED AND QTZ HEALED STRONG QTZ FLOODING MINOR Py.		3			34634	3.0	1	82 / 18 / 53 / 0.1
239														
240														
241														
242						QTZ VEIN ≤ 4mm @ 45° WEAK CHLORITIC LAMINATIONS		7	5.8	93	34635	3.0	1	56 / 15 / 21 / 0.1
243														
244						QTZ HEALED FRACTURES								
245														
246								6			34636	3.0	2	53 / 19 / 24 / 0.1
247														
248							248.0 - 252.5 TUFF MOTTLED BUFF, GREY, PALE GREEN EXTREMELY SILICEOUS. FRAG ≤ 3mm. AND APHAN DIFFUSE AND GENERALLY ROUNDED WEAKLY BRECCIATED. DIS Py 1%. OCCASIONAL QTZ FILLED FRACTURE. MINOR CALCITE ON FRACTURE SURFACES.	3			34637	1.0	4	77 / 20 / 25 / 0.1
249														
250						WEAK CARB		30	5.8	86	34638	3.0	1	81 / 11 / 26 / 0.1
251														
252						≤ 2mm Py STRINGER @ 20°		6			34639	1.5	3	63 / 12 / 29 / 0.5
253							252.5 - 266.9 ANDESITE Fg. EXTREMELY SILICEOUS MED. TO DARK GREY. WEAK CROSS HATCHED FRACTURES HEALED W/ QTZ AND CARB. DIS. Py ≤ 1% W/ Py GENERALLY OCCURRING ALONG FRACTURES BUT NOT NECESSARILY ASS W/ QTZ OR CALCITE. PATCHES ≤ 3mm OF CHLORITE ALT SCATTERED. WEAK MAG. ASS W/ SULPHIDES. 258.0 - 266.9 CORE LIGHT TO MED GREY. SPOTS OF CHLORITE ALT INCREASE IN AMOUNT BUT DECREASES TO 1-2 mm.	3	5.6	95	34640	2.5	3	39 / 15 / 23 / 0.1
254														
255														
256						5 QTZ. VEIN ≤ 7mm @ 20°		4			34641	3.0	3	43 / 20 / 24 / 0.2
257														
258								9	5.7	96	34642	3.0	1	75 / 12 / 25 / 0.4
259														
260														
261														
262								9			34643	3.0	1	27 / 9 / 21 / 0.1

WEAK

HOLE NO.: HF88-1 | PROJECT: | PAGE NO.: 10 OF 10

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

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

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

SECTION	ALTERATION: CLAY	ALTERATION: SILICA	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Au	% SULPHIDES Ag	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
263						QTZ VEIN ≤ 15mm @ 20°													
264						Py 2%.													
265						Py STRINGERS @ 5-10°													
266								14		5.7	96	34644	3.0	1	174	12	22	0.1
267																			
268						MODERATE TO STRONG CROSS HATCHED QTZ + QTZ CARB STRINGERS.	266.9 - 274.32 - INTRUSIVE (GRANODIORITE?) MED GRAINED MOTTLED GREEN. FELD - 20-40° BIOT - 10% CHLORITE - 15-20% OTHER MAFICS - 10% QTZ - 10-20% OCCASSIONAL CHALCEDONIC LAYERED QTZ VEINS W/MINOR WHITE TO PINK CALCITE. DIS Py ≤ 5% MINOR Py AS W QTZ STRINGERS. SILICEOUSNESS DECREASES W DEPTH. SCATTERED IRREGULAR PATCHES OF SOFT BRICK-RED MATERIAL (SIDERITE?)		3		55	96	34645	3.0	1	72	11	13	0.:
269						30mm GOUGE @ 35°.													
270																			
271						LAYERED QTZ VEIN ≤ 6mm @ 80°													
272								3				34646	3.0	1	108	7	12	0.1
273																			
274								3		0.42	95	34647	1.32	1	100	6	17	0.4
						274.34													

HOLE NO.: HF-88-2 | PROJECT: MORACA ABS. - EXPO. | PAGE NO.: 1 OF 3 | EC-160

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: NOV 15/88 | REP. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: NOV 17/88 | SCALE: METRIC

INCLINATION: -60 | BEARING: 360° | TOTAL DEPTH: 75.59 m | LOGGED BY: EDH

SECTION	ALTERATION (STRENGTH)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
							Au ppb			NQ							
12.6					OVERBURDEN.												
13		STRONG			QTZ VEIN ≤ 5mm @ 45° Py 1% FRACT.												
14					GREY QTZ VEIN ≤ 3mm @ 5-15° UNMINERALIZED												
15																	
16					GOUGE @ 30°												
17					CORE SHATTERED.												
18																	
19					QTZ VEIN ≤ 10cmm @ 20° GREY. Py ON FRACT < 1%												
20																	
21					POSSIBLE DIORITIC INTRUSIVE MOTTLED BUFF/GREY/GREEN. SHOWING GOUGE												
22																	
23					MODERATE GOUGE.												
24					GREY QTZ VEIN ≤ 10 cm. Py ON FRACT ≤ 1%.												
25																	
26					GREY QTZ VEIN ≤ 10cm Py ON FRACT ≤ 1%.												
27					STRONG GOUGE												
28					GREY QTZ ≤ 50mm. GREY QTZ ≤ 6mm 2% Py ON FRACT @ 40°												
29					GREY QTZ ≤ 15cm Py ON FRACT ≤ 1%.												
30					STRONG GOUGE												
31					GREY QTZ. FRAG.												
32																	
33																	
34																	
35					CORE SHATTERED. NUMEROUS GOUGE ZONES												
36																	
37																	
38																	

12.6 - 75.59 ANDESITE. MED - DARK GREEN. GENERALLY Fg. WEAKLY TO MOD BRECCIATED WEAK TO MOD FOLD ALT. DECREASING W DEPTH. SOFT GREEN ALT SCATTERED THROUGHOUT (SAUSSURITE) CORE MOD - STRONGLY FRACTURED W NUMEROUS GOUGE ZONES QTZ VEINING IS NOT STRONG AND TENDS TO ORIENT 30-60°. WEAKLY MAGNETIC

Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
330	5.3	96	34648	2.4	40	2659	28	141	0.6
410			34649	3.0	61	3713	21	105	0.8
225	4.9	89	34650	3.0	40	1923	17	86	0.3
290			34651	3.0	31	2517	26	132	0.9
260	5.2	81	34652	2.5	37	2197	21	116	0.5
86			34653	0.5	43	1088	15	83	0.5
117			34654	2.24	22	1226	16	123	0.4
116			34655	0.24	34	1367	13	82	0.5
101	7.0	56	34656	3.0	22	1140	9	107	0.4
114			34657	3.0	29	2065	17	133	0.6
86	8.5	46	34658	3.0	24	1239	11	122	0.3

HOLE NO.: HF-88-2 | PROJECT: | PAGE NO.: 2 OF 3

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

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

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

SECTION	ALTERATION: SILICA	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Au	Ag	Pb	Zn	As
40		STRONG			MOD. GOUGE 60% GREY QTZ ± 3-4% Py. ON FRACT.		76			34669	1.5	36	2312	32	146	0.8
41					MINOR SOFT MILKY WHITE KAOLIN		91			34670	0.5	20	1115	13	141	0.4
42					5% Py ON FRACT.		61			34671	1.5	19	1588	29	99	0.7
43																
44					10mm GREY QTZ VEIN @ 10° Py 6-1% ON FRACT.	45.0 - 75.59. WHITE CALCITE IS COMMON FRACTURE COATING.	66			34672	2.5	24	1972	15	106	0.7
45																
46																
47							68	5.45	60	34673	3.0	27	1517	21	117	0.6
48					SOFT QTZ FRAG IN GOUGE											
49							74			34674	3.0	27	1305	21	111	0.5
50					50-60° GOUGE. ONE CONTACT @ 40°											
51																
52							49	4.93	65	34675	3.0	21	1358	21	150	0.5
53					QTZ VEIN 55mm @ 30° 2-3% MAGNETITE SILICEOUS ± 2-3% Py											
54																
55							74	5.3	68	34676	3.0	12	1077	16	109	0.5
56																
57																
58							98			34677	1.83	23	1186	11	92	0.3
59					QTZ VEIN 20mm @ 45°											
60		SHATTERED					29			34678	0.67	18	1572	13	128	0.5
61					MOD. TO STRONG GOUGE CALCITE ON FRACTURES											
62							44	5.6	71	34679	2.5	12	731	9	70	0.2
63																
64					STRONG GOUGE MINOR CALCITE ON FRACT.											
65							87			34680	3.0	25	1416	14	89	0.4
66																
67							94	6.9	60	34681	2.0	15	1170	11	65	0.3
68					68.58-69.49 GROUND CORE. ONLY 10CM REMAINS											
69							32			34682	3.0	14	858	9	82	0.3

HOLE NO.: HF 88-2 | PROJECT: | PAGE NO.: 3 OF 3

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

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

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

SECTION	ALTERATION (Qtz, Sil, Sil Frac)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
70				xxxxxx	QTZ VEIN 12CM @ 30° BLACK METALLIC FRACTURE FILLING (MAGNETITE). ALTHOUGH CORE IS STRONGLY BOUDED THE FRAGMENTS OF ANDESITE ARE STILL MOD-STRONGLY SILICEOUS.												
71				xxxxxx						34672	3.0						
72				xxxxxx			34			34673	2.0	9	670	20	75	0.2	
73				xxxxxx													
74				xxxxxx				3.79									
75				xxxxxx			47		48	34674	2.59	8	660	19	67	0.1	
					75.59 EOH.												

HOLE NO.: HF88-3 | PROJECT: MORABA RES - GRID | PAGE NO.: 1 OF 1 | EC-161

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

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

INCLINATION: -45 | BEARING: 270° | TOTAL DEPTH: 37.49. | LOGGED BY: EJH

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
12					12.19 OVERBURDEN.		Au ppb										
13		MOD	STRONG		QTZ VEIN 4.5mm @ 200° MAG 5% TABLE EP.		34			34854	1.22	8	321	23	116	0.1
14					14.0 - 15.24 - ANDESITE.		370			34855	0.61	20	3054	16	231	0.4
15							260			34856	0.88	11	1760	14	224	0.1
16					15.24		37			34857	0.34	4	395	29	120	0.1
17					TRICONED - NO CORE			13.87	24								
18																	
19																	
20																	
21					21.34												
22																	
23		3	STRONG		13.41 - 26.06 - QTZ - DIORITE, INTRUSIVE.		10			34858	1.2	3	140	7	73	0.1
24					23.38 - 24.54 - WELDED TUFF (LT. GREY TO CLEAR) DIS Py 2-3%.		310			34860	1.82	19	1927	17	200	0.4
25					MED - COARSE GRAINED. GREEN. FELD - 45-55% MAFIC - 30-40% QTZ - 10-15% MAFICS ALTERED TO CHLORITE 15-20%. SOFT GREEN WAXY MATTRAINE (PYROPHYLLITE?) MAGNETIC.		430			34861	1.68	29	4648	14	194	1.1
26			STRONG		26.06.												
27																	
28																	
29					TRICONED - NO CORE												
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37					37.49 HOLE ABANDONED.												
38																	

HOLE NO.: HF 88-4 | PROJECT: | PAGE NO.: 1 OF 7 | EC-162

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: NOV 20/88 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: NOV 23/88 | SCALE: METRIC

INCLINATION: -60° | BEARING: 090° | TOTAL DEPTH: 187.15 | LOGGED BY: EDN

SECTION	ALTERATION (SILICIFIED)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
					OVERBURDEN TO 6.71 M		Apprx ppb										
8					MINOR Fe STAINING ON FRACT.		690			346835	2.29	23	5037	22	184	2.2
9					6.71 - 15.5 ANDESITE PORPHYRY. Fg LIGHT GRN SILICEOUS MATRIX w DARK-GREEN IRREGULARLY SHAPED PHENO ≤5MM. WEAK TO MOD MAGNETIC. PHENO ARE SOFT AND MASSIVE MICACEOUS (CHLORITE). Py ≤1% (SUBHEDRAL TO ANHEDRAL) IS DISS. AND APPEARS TO OCCUR PRIMARILY WITHIN THE PHENO. VERY LITTLE QTZ VEINING EXCEPT FOR OCCASIONAL HAIRLING STRINGERS @ 5-45° STILL LESS COMMON ARE STRINGERS OF WHITE CALCITE.										
10							720	5.4	87	346836	3.0	21	5067	23	199	2.2
11																	
12					CALCITE VEIN ≤3MM @ 45°												
13					VUGGY CALCITE STRINGER ≤2MM X-CUT QTZ STRINGERS w MINOR DISPLACEMENT		750			346837	3.5	24	5081	36	282	2.0
14																	
15					QTZ VEIN ≤10CMM @ 50° IRREGULARLY LAMINATED w cp 5-10% w TRACE BORNITE			5.6	95								
16																	
17					QTZ STRINGERS @ 25-30° SURROUNDED BY 1-2MM OF SOFT DARK GREEN ALT.		365			346838	2.5	20	2041	37	234	1.0
18																	
19																	
20					15.5 - 29.9 - ANDESITE BRECCIA. GREY TO GREEN. Fg. STRONGLY SILICEOUS OCCASIONAL ASPECTS OF PORPHYRY. PATCHY CHLORITE ALT. 1-2%. WEAK CALCITE FRACTURE FILLING RX BARREN OF SULFIDES EXCEPT FOR LOCAL BLEBS AND FRACTURE FILLINGS OF cp ≤.5%		410			346839	3.0	20	2067	28	162	0.7
21					QTZ-CARB (PINK) VEIN ≤10MM @ 40			4.7	77								
22					QTZ-CARB VEIN ≤ 4MM @ 25-30° CUTS 5CM DYKE AND PORPH.		390			346840	3.0	13	2239	26	148	0.7
23					COULEE 5CM @ 45°.												
24																	
25					PINKISH QTZ-CARB STRINGERS ≤3MM @ 5-15°. FINE TRACERY STRINGERS SURROUNDING		400	5.2	85	346841	3.0	19	2533	24	156	0.7
26																	
27																	
28																	
29					29.9 - 42.0 ANDESITE PORPHYRY. w WK - MOD BRECCIATION LOCALLY. SIMILAR TO 6.91-15.5'. Py APPEARS TO BE MORE EVENLY DISSEMINATED THROUGHOUT RX AND MORE COMMON AS FRACTURE COATING.		430			346842	2.9	24	2605	21	143	0.7
30					LESS SILICEOUS.												
31							380	4.8	98	346843	2.1	28	3122	23	146	1.0
32																	
33							410										
												17	2964	29	152	1.0	

HOLE NO.: HF 88-4 | PROJECT: | PAGE NO.: 2 OF 7

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

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

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

ALTERATION (CLAY, SILICA) | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

SECTION 34–64

RH FRACTURED QTZ-CARB HEALED Py 5-10% DIS + ON FRACT.

CORE STRONGLY FRACTURED W PINKISH QTZ-CARB FILLING

CORE SHATTERED W MINOR GOUGE

5cm GREY QTZ VEIN W SKARN? OVERLYING 5cm BRECCIATED WALL RX.

PINK SILICEOUS SKARN? SULFIDE DIS. + STRINGERS 5-10% (Py 3-4% Cp 5-6% TRACE BORNITE).

WEAK TO MODERATE TRACERY OF QTZ STRINGERS W MINOR CARB. LOCAL MINOR SKARNIFICATION? SULFIDES 4-5% DIS + FRACTURE COATING.

WK PINKISH GREEN SKARN? SULFIDES 3-5%

QTZ VEIN 10cm @ 40°

SULFIDES (Py) 1-2%

QTZ VEIN 4mm @ 80° VUGGY.

CLAY ALT. WK. @ 40°

NOTE: CORE WK-MOD FRACTURED. HEALED W QTZ, CARB. AND PINKISH EPIDOTE.

QTZ VEIN 5cm @ 5-10° Py 3-4%

42.0 – 68.4 – ANDESITE W LOCAL BRECCIA. VERY SILICEOUS W MINOR LOCAL CLAY ALT.

% SULPHIDES Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
290			34684	0.6	20	2376	31	119	0.7
330			34685	0.7	35	3024	23	157	0.8
290	5.5	95	34687	2.7	30	2308	10	126	0.6
610			34688	1.0	8	1667	8	55	0.7
600	4.9	98	34689	1.0	18	3092	35	153	1.2
310			34690	1.0	15	1994	19	129	0.6
510			34691	1.0	27	3611	26	206	1.7
320			34692	1.0	53	3038	33	328	0.9
490	5.0	92	34693	3.0	18	2882	28	212	0.9
540			34694	3.0	21	3004	23	189	0.8
770			34695	1.0	17	3845	17	120	1.0
810	5.3	97	34696	1.0	142	5066	28	170	1.2
620			34697	1.0	38	3760	13	130	1.1
650			34698	3.0	32	3882	2	125	1.0
370	5.9	89	34699	3.0	31	2449	15	155	0.8
450			34700	3.0	30	2854	26	312	1.3
280	5.5	91	34701	3.0	21	2706	5	150	0.8

HOLE NO.: HF 88-4 | PROJECT: | PAGE NO.: 7 of 7

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

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

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

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

68.4 - [illegible] ANDESITE PORPHYRY
DISS. Py ≤ 1% w LOCAL CONCENTRATIONS ON FRACTURE SURFACES ≤ 5%.

- CORE STRONGLY FRACTURED AND HEALED W QTZ-CARB + ANK $FeCO_3$. WK. SKARN? SHARP UPPER CONTACT @ 5-10°. Py ≤ 1%. 68.4-69.0 - Py DISS + FRACT 3-4%
- 5-10cm GOUGE @ 5-10°.
- QTZ-VEIN > 2cm @ 0-5°. LOWER CONTACT @ 30°
- CORE LT GREY ARGIL SILICEOUS BUT IS MOD SOFT WHICH SCRATCHED. Py DIS. ≤ 2%. QTZ VEIN 4mm @ 20° Py 5-10% ALONG LOWER CONTACT.
- WK. 20cm GOUGE @ 30°
- MOD-STRONG 30cm GOUGE.
- CORE GREY WK-MOD FELD. ALT.
- QTZ VEINS ≥ 10cm. DIS Py + Py ON FRACT 5%.
- CROSSHATCHED FRACTURING HEALED W QTZ + QTZ-CARB ($FeCO_3$ COMMON) CORE STILL SPOTTY BUT MORE MAFIC (BASALT?)
- QTZ VEIN 85cm @ 45°
- GREY CORE. VARIABLE SILICEOUSNESS. 2-3% DIS Py.
- WK-MOD CROSSHATCH STRINGERS QTZ - QTZ CARB ($FeCO_3$).

SECTION	ALTERATION: CHL.	ALTERATION: SERIC.	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm: Mo	Cu	Pb	Zn	Ag
64						Au ppb										
65						240	6.0	88	34702	3.2	20	23	15	8	125	0.7
66																
67																
68			MOD →			260			34703	1.2	17	16	54	15	122	0.6
69						270			34704	0.6	33	30	62	8	193	1.1
70																
71						240	5.2	94	34705	2.0	38	25	02	13	146	1.1
72						220			34706	1.3	30	31	02	17	177	1.5
73																
74						180			34707	3.4	108	25	23	12	80	1.0
75																
76						108	5.6	91	34708	2.3	30	21	89	24	215	0.8
77																
78						145			34709	2.3	18	23	27	14	107	0.5
79																
80						135	5.7	91	34710	1.3	190	27	75	21	56	0.9
81																
82						125			34711	1.4	26	17	73	10	148	0.5
83																
84						166			34712	3.0	48	22	25	18	123	0.6
85																
86																
87						167	5.3	94	34713	1.9	31	26	08	13	168	1.0
88																
89						103			34714	1.56	141	29	42	19	153	0.8
90																
91						159			34715	1.24	65	29	11	24	201	1.0
92																
93						144			34716	3.8	23	20	94	12	126	0.7
94																

HOLE NO.: HF 88-4 | PROJECT: | PAGE NO.: 4 OF 7

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

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

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

SECTION	ALTERATION (Clay / Silica)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Aug/ph	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
94																	
95																	
96					WK COULE. 2-3% Py.		490	5.4	94	34717	2.4	18	3349	16	120	0.9
97																	
98					IRREGULAR PATCHY QTZ VEIN CREAMISH-GREY SOAPY MATERIAL (PYROPHYLLITE?)		260			34718	2.3	61	3321	8	132	1.5
99																	
100							112	5.6	93	34719	2.3	25	1629	6	134	0.3
101					101.0 - 124.0 - ANDESITE Fg. DARK GREY MOD-STRONGLY SILICEOUS. WEAKLY MAGNETIC. PATCHY CHLORITE ALT. 3-5%. POORLY FRACTURED AT ALL ANGLES AND QTZ HEALED. QTZ STRINGERS OCCASIONALLY SHOW LAMINATION.											
102																	
103							113			34720	3.0	19	1673	13	116	0.5
104					2cm COULE												
105																	
106							210	6.4	94	34721	3.0	35	2442	4	84	0.5
107																	
108					VUGGY.												
109					WK-MOD COULE. Py 1-2%.		250			34722	3.0	127	2688	12	124	0.6
110																	
111					Mo BLEB ON FRACT.		270	6.3	92	34723	1.1	125	3134	5	72	0.6
112					STRINGER @ 35° w Cp 2-3%. HEMATITE 10-15% Py 5-10%. MORE STRONGLY MAGNETIC THAN WALL RX		970			34724	0.3	156	9858	10	118	1.5
113							380			34725	1.0	84	4858	10	128	0.9
114																	
115							390			34726	3.1	41	3999	11	129	1.0
116					Mo BLEB.												
117					5cm QTZ-CARB. @ 10°		440	5.5	95	34727	0.3	53	4455	8	95	1.2
118					<2% Cp. FINELY DIS.		270			34728	0.7	99	3007	2	79	0.7
119					GREY CORE. LOCALLY SILICEOUS LOCAL COULE.		125			34729	0.6	57	3149	5	193	0.3
120							184			34730	1.7	43	2809	2	59	0.4
121					STRONGLY FRACTURED & QTZ, QTZ-CARB, FeOx HEALED. MOD-STRONG COULE. MOD MAGNETIC. DIS Py 1-2%.		109	5.0	90	34731	2.5	41	1602	7	60	0.3
122																	
123							52			34732	2.5	28	862	21	115	0.4

HOLE NO.: HF88-4. PROJECT: PAGE NO.: 5 OF 7

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

COORDINATES: N. E. DATE FINISHED: SCALE:

INCLINATION: BEARING: TOTAL DEPTH: LOGGED BY:

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

124.0 - 139.5 - ANDESITE TUFF.

Fg. MOD - DK. GREY. VERY SILICEOUS. FRAC ≤ 3mm FILL QTZ VEINS (GENERALLY ≤ 3 mm @ 10-40°) DIS. SULFIDES (Py) 5%. OCCASSIONALLY CONCENTRATED ALONG FRACTURES. WK WHITE CARBONATE ON OCCASSIONAL FRACTURES.

139.5 - 187.15 ANDESITE

STRONG GOUGE

FRAC ≤ 4mm.

5mm QTZ-CARB VEIN @ 20°

5mm QTZ-CARB VEIN @ 20°

IRREGULAR PATCH (≥ 5cm) GREEN SOAPY MATERIAL (PYROPHYLLITE?) SULFIDE (Py) ACROSS 10-15%.

QTZ VEIN @ 40° Py BLOBS + STRINGERS 2-4%

3mm QTZ VEIN @ 20° MINOR GOUGE.

CORE STILL GREY BUT W IRREGULAR GREEN BLOTCHES ≤ 3mm. SOFTER THAN MATRIX.

2mm Py STRINGER @ 90°

20mm GOUGE.

2mm Py STRINGER @ 90°

20cm WK-MOD GOUGE

MOD BRECCIA W CARBONATE HEALED FRACTURES ABOVE.

WK. GOUGE. MIXTURE QTZ & WALL RX (50/50). Py 5%. @ 50.

SECTION	ALTERATION: CLAY	ALTERATION: SILICA	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM: Mo	Cu	Pb	Zn	Ag
124						Au ppb										
125						11			347333	3.0	9	201	16	68		0.5
126							5.9	93								
127																
128																
129						12			347334	3.0	8	201	6	71		0.1
130																
131																
132						14			347335	3.0	4	179	9	60		0.1
133							5.43	96								
134						21			347336	1.5	3	220	16	42		0.1
135						67			347337	0.5	28	203	11	32		0.1
136																
137						13			347338	3.0	18	386	12	53		0.2
138																
139						17	5.67	95	347339	0.8	36	79	8	20		0.3
140																
141						10			347340	3.2	9	249	6	50		0.1
142																
143																
144						13	5.3	98	347341	3.0	6	172	3	60		0.1
145																
146																
147						26			347342	3.0	7	192	9	52		0.1
148																
149																
150						16	5.7	98	347343	3.0	9	315	8	50		0.1
151																
152						18			347344	1.0	11	127	17	26		0.1
153						3			347345	3.0	6	104	6	30		

HOLE NO.: HF 88-4 | PROJECT: | PAGE NO.: 6 of 7

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

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

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

ALTERATION: carb. | sericite

COMMENTS:

AVE CORE REC'Y / HOLE

SECTION	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES As	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
154									3.0						
155				15mm QTZ VEIN @ 80°											
156				WK. BRECCIA. QTZ-CARB HEALED Py 5%. UPPER CONTACT SLICKENSIDES @ 80°.	5	5.6	96	34746	3.0	6	93	11	33	0.1
157															
158				IRREGULAR PATCHY QTZ ≤ 3cm. Py 5%. @ 25°.											
159															
160				WK. 20cm GOUGE @ 20°	4	5.2	96	34747	3.0	11	186	10	26	0.1	
161				STRONG 40cm GOUGE											
162															
163				WK - MOD GOUGE. QTZ ≥ 15%. Dis Py ≤ 1%.	10			34748	2.0	17	218	5	32	0.4	
164															
165															
166				WK - MOD BRECCIATION TO GOUGE	2	5.2	94	34749	3.0	9	99	6	24	0.1	
167				STRONG SHEAR @ 35° LAMINATED. CRUSHED WALL ROCK AND DK GREY CLAY.											
168					9			34750	3.0	2	73	5	23	0.1	
169															
170				168.0 - 187.15 Dis Py CONTENT GRADUALLY REDUCES TO 1-2%											
171				FELD CONTENT INCREASES TO 40-60% TO SUGAR ALT. TO CLAY.	2	5.5	98	34751	3.0	3	91	11	36	0.7	
172				5mm QTZ VEIN @ 30° 5-10% Py.											
173				30mm GOUGE.											
174				QTZ-CARB VEIN ≤ 4mm @ 5-10°.	31			34752	3.0	1	68	8	32	0.1	
175				IRREGULAR FRACTURE PATTERN HEALED TO QTZ + QTZ-CARB. TO NO ACCOMPANYING SULFIDES.											
176															
177				6CM GOUGE @ 40°	1	5.8	97	34753	3.0	2	46	8	28	0.7	
178															
179				MOD-STRONG 40cm GOUGE @ 10-20°.	5			34754	3.0	1	88	8	35	0.4	
180															
181				VUGGY QTZ-CARB STRINGERS @ 5-60°.											
182				MOD BRECCIA QTZ. HEALED.											
183					1	4.8	96	34755	3.0	1	44	5	26	0.1	

HOLE NO.: HF88-4 | PROJECT: | PAGE NO.: 7 OF 7

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

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

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

SECTION	ALTERATION: SILICA	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Amph.	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm: No	Cu	Pb	Zn	Ag
184																	
185		Mod			CORE VUGGY.		4			34756	1.5	5	44	7	25	0.6
186					100mm QTZ-CARB VEIN @ 70°			3.0	90							
187					5-10% Py.		7			34757	1.65	5	35	5	19	0.2
					EOH 187.15'											

HOLE NO.: HF-88-5 | PROJECT: Morrison Rex - EXPO. | PAGE NO.: 1 OF 7 | EC-163

COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED: NOV 23/88 | REF. TO CLAIM CORNER:

COORDINATES: N. E. | DATE FINISHED: NOV 26/88 | SCALE: METRIC.

INCLINATION: -60° | BEARING: 360 | TOTAL DEPTH: 188.06 | LOGGED BY: EDH

SECTION	ALTERATION (SILICA)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM Mo	Cu	Pb	Zn	Ag
6.1					OVERBURDEN 6.1		Amphib										
7–29					6.1 - 188.06 ANDESITE Fg. med-dk grey mod. siliceous. Blotchy chlorite alt. 10-15% mod fractured. W occassional qtz stringers @10-90°. X-cutting qtz + qtz-carb stringers appear to be younger. Weakly magnetic. Dis Py ≤ 1% trace Cp. on fractures. Areas in and around qtz vein occassionally show minor to mod amounts of pale greyish green soapy material (pyrophyllite?)		154	5.5	93	34758	2.9	33	1609	14	98	0.8
							270			34759	3.0	18	2336	18	101	1.0
							108	5.4	96	34960	3.0	15	1394	21	94	0.6
							77			34961	1.6	12	936	19	91	0.9
							129			34962	0.5	13	1164	26	95	1.0
							105			34963	1.4	15	1021	21	174	1.0
							152	5.2	96	34964	2.0	15	1589	23	98	0.8
							126			34965	0.5	18	1909	22	148	0.4
							24			34966	1.0	31	996	21	89	0.1
							61	6.9	95	34967	1.8	10	806	22	102	0.5
							43			34968	1.0	7	586	24	94	0.4
							53			34969	1.8	6	589	23	73	0.7
							72			34970	3.0	14	934	18	93	0.5

7 Qtz vein 20mm @ 90°. Strong gouge. Overlying rx fractured and calcite healed.

10 Qtz vein ≤ 4mm @ 5° W wk gouge 1cm either side.

13 Wk gouge @ 25°.

14 Qtz vein 1cm @ 45°. 1cm chl/fsp alt. either side magnetite alter 1-2%. Wk calcite on fractures.

16 Wk. associated fracture W magnetite infilling.

17 Qtz vein 20mm @ 30°

18 Qtz vein 10cm @ 40° 2-3% Py.

19.5 - 19.8 - core well fractured W calcite filling.

20.65 - 20.70 - wk gouge W 10-15% Py.

21.0 - 21.8 - core well fractured W mod - strong local gouge @ 40-50° 11cm qtz vein (un mineralized) fractured and healed W calcite and pink $FeCO_3$

21.75 - 21.85 - lt. grey very siliceous. Leached. Contains irregular areas of pyrophyllite (?)

23.9 - 24.6 - (estimated) W wk. gouge qtz carb + carb. healed. minor $FeCO_3$

25.6 - 26.0 - irregular patches magnetite 3-4%. Cut by wk. vuggy calcite stringers.

Qtz vein ≤ 5mm @ 10° chl/fsp alt.

Qtz vein ≤ 6mm @ 20°. Bisected by Py fract. // stringer magnetite

HOLE NO.: HF 88-5 | PROJECT: | PAGE NO.: 2 OF 7

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

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

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

SECTION	ALTERATION (SILICA)	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM Cu	Pb	Zn	Ag
20							Ag ppb					No				
31					QTZ VEIN 40mm @ 40° Py 3-5% Cp. TRACE PYROPHYLLITE 15% 20mm GOUGE UNDERLYING.		107	5.5	98	3V771	3.0	20	1027	35	106	0.5
32																
33					33.8 - 34.3 - WK - MOD GOUGE 20mm Z-Z VEIN @ 30.1 & CROSSING CURVED FRACTURES.		102			3V772	1.7	13	1319	20	96	0.2
34							78			3V773	0.7	59	3595	18	222	2.0
35																
36					QTZ VEIN 220mm @ 30° CONTAINS FRAGMENTS OF WALL RX. Py 1-2% CALCITE HEALED FRACTURES.		81	5.2	98	3V774	2.6	26	1429	29	211	1.3
37																
38					QTZ CARB HEALED FRACTURES		200			3V775	3.0	18	1807	19	154	0.8
39					MOD. 10cm GOUGE & 10mm QTZ VEIN.											
40					TRACE (<1%) OF CALCITE SIR HEALED FRACTURES CUTTING QTZ VEINS	40.0 - 62.10. SULFIDE CONTENT VARIES LOCALLY BUT IS GENERALLY 1-2% & 5-10% Cp.	109	5.4	94	3V776	1.0	14	1400	17	149	0.7
41					MAGNETITE STRINGERS @ 20°											
42							97			3V777	1.9	10	1095	19	119	1.0
43					QTZ VEINS 5mm - 10mm. SULFIDES IN VEIN & WALL RX. Py 3-4% Cp 1-2%		36			3V778	0.5	29	1352	61	282	1.7
44																
45							95	5.3	94	3V779	2.6	15	1413	21	181	1.5
46					QTZ VEIN 20mm - 50mm & RECEMENTED WALL RX. Py 1-2% Cp 2-3% @ 30° X-CUTTING SLICKENSIDES @ 20°		53			3V780	1.0	24	1659	44	166	1.8
47						46.16 - 47.0 - CORE DK. GREEN AND SOFT. "TALCY" FEEL TO SCRATCH(?) MATERIAL. (PYROPHYLLITE?).	31			3V781	1.5	68	1497	18	123	1.0
48																
49					WK - STRONG BRECCIATION AND GOUGE		105			3V782	1.8	136	2559	26	134	1.5
50																
51					20mm QTZ VEIN @ 50° AND 10mm STRONG GOUGE		142	5.1	96	3V783	2.7	34	2099	20	170	0.6
52																
53					53.8 - 54.3 - STRONG GOUGE											
54						54.6 - 75.3 CORE IS VERY SILICEOUS	132			3V784	3.0	31	1694	26	100	0.6
55																
56							90	5.1	96	3V785	3.0	15	1288	21	86	0.8
57																
58					MAGNETITE ALONG FRACTURES @ 50°											
59																

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

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ALTERATION: SILICA

SECTION	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED PPM Mo	Cu	Pb	Zn	Ag
				DESCRIPTIVE GEOLOGY												
60																
61				VUGGY QTZ-CARB VEIN 5 CMM @ 0-10°		120										
62				4CM QTZ VEIN UNDERLYING 2CM STRONG GOUGE.	62.6 - 63.3 - TUFFACEOUS DIS-SULPHIDES 3-5% Py 1-3% Cp 1-2%.		5.1	94								
63						129			34788	3.0	75		17	98	0.7	
64				63.9 - MARGINAL GLASS ALONG FRACTURE.												
65				QTZ VEIN 1CM @ 75° Py-1% Cp 1% CUT BY QTZ-CARB VEIN @ 10° DISPLACEMENT ± 5MM.												
66																
67						197	4.9	100	34789	3.0	17		18	82	0.6	
68																
69																
70				QTZ VEIN ≤ 1CM @ 0-5° SULFIDES ≤ 2% (Py/Cp 50/50) SURROUNDING CORE WK LEACHED TO BROWN ALT (EPIDOTE?) ADJACENT TO VEIN.		125			34790	3.0	19		13	115	0.6	
71																
72						84	5.6	98	34791	2.0	17		14	244	0.5	
73																
74					75.2 - 76.2 - CORE DK GREEN AND SOFTER. FROM 75.9 - 76.2 CORE APPEARS LEACHED W BLOTCHES OF SOFT PALE-GREEN WAXY MATERIAL. (PYROPHYLLITE?). 1-2% Py.												
75						132			34792	2.3	22		22	115	0.8	
76				STRONG GOUGE 7CM.		480			34793	1.0	13		14	111	0.7	
77						127	5.2	92	34794	2.7	28		19	99	0.5	
78																
79																
80						84			34795	3.0	20		10	56	0.4	
81																
82																
83																
84				QTZ VEIN 5CM @ 20° CP ≤ .5% BLEBS WK-MOD ALT. SURROUNDING VEIN (EPIDOTE)		177	5.3	96	34796	3.0	28		11	81	0.4	
85					87.5 - 90.5 - WK LEACHED ZONE W LOCAL BRECCIATION AND GOUGE.											
86																
87				87.5 - 87.9 - MOD LEACHED W FRACTURE @ 5° W MANGANESE STAIN. WK SULPHIDES.		195			34797	2.4	36		16	90	0.5	
88																
89				STRONG 2CM GOUGE @ 50°		120	5.2	92	34798	0.5	33		23	95	0.5	
90						320			34799	2.4	40		20	97		

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

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

COMMENTS:

AVE CORE REC'Y / HOLE

DESCRIPTIVE GEOLOGY

SECTION	ALTERATION (SILICIFICATION)	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
90					90.1-90.5 = D.K. BRECCIA. QTZ-CARB VEINING @ 45°. WK-MOD LEACHED.											
91					WK CALCITIC FRACTURES.	210			34800	2.0	68	2036	19	75	0.7
92						124	5.7	91	34801	1.8	45	2897	15	81	0.7
93						116			34802	1.5	167	1100	16	48	0.4
94					93.3-95.8 - MOD-STRONG GOUGE 3cm QTZ-CARB VEIN @ 0-10°	32			34803	2.2	50	936	8	48	0.3
95					95.6-95.8 - UNDULATING BAND OF TUFF (FINE BRECCIA?) @ 30°. MOD SOFT. FRAG ANGULAR - ROUNDED ≤ 4mm (MAX 10mm).	27			34804	1.0	29	704	14	38	0.2
96					10mm QTZ VEIN @ 80°	57	5.6	95	34805	3.0	27	949	11	36	0.3
97					98.4-98.8 - WK BRECCIA HOSTED IN QTZ AND MINOR CARB. Py 2-3%.	19			34806	1.0	26	564	14	36	0.3
98						17			34807	0.5	29	561	11	47	0.2
99						38			34808	1.5	107	969	13	33	0.2
100					4mm QTZ VEIN @ 0-5° CORE WK LEACHED	7	5.1	94	34809	1.5	5	288	15	33	0.2
101						167			34810	1.5	12	384	12	30	0.3
102					103.1-103.3 - LEACHED Py STRINGER @ 45°.	29	5.4	96	34811	3.0	15	529	20	45	0.4
103																
104						26			34812	3.0	13	1102	15	69	0.4
105					MOD PERVASIVE SILICIFICATION Py 2-3% (LOCALLY 5%). QTZ-CARB HEALED STRONG SLICKENSIDES @ 5-15°	19			34813	1.8	10	634	11	48	0.2
106						35	5.9	89	34814	1.0	14	966	17	50	0.4
107						24			34815	1.0	26	399	12	34	0.5
108					TRACE OF QTZ + QTZ-CARB HEALED FRACTURES.	41			34816	1.0	10	1003	19	40	0.5
109						87			34817	0.8	44	3492	4	41	0.4
110																
111																
112					IRREGULAR PATCHES AND STRINGERS OF QTZ AND PINK HEAL. NO MINERALIZATION.											
113					114.2-114.5 - MOD GOUGE @ 10°											
114					115.2-115.3 - MOD GOUGE @ 40°											
115																
116					115.7-116.35 = IRREGULAR PATCHES QTZ AND CARB. Py BLEBS 3-4% MINOR MAGNETITE ALONG SOME FRACTURES.											
117																
118					TRACE Mo.											
119					119.0-123.0 Py CONTENT 3-4%											
120																

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SECTION	ALTERATION: Silica	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES Am	ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
120					CORE STRONGLY GROUND (LOOKS PARTICLY DEFORMED) 30-40° DT-CARB. OCCASSIONAL BLEBS OF MAGNETITE Py (DIS + BLEBS) 2-3% PINK FOLDS SLICKENSIDE @ 5°.		23											
121							53		4.5	96								
122							22											
123					123.0 - 126.0 - PURE DK. GREEN AND SILICEOUS Py 1-2%.		58											
124							16											
125							31		5.3	94								
126					126.0 - 138.3 MOD - STRONG HYDRO ALT. MIXED SILICEOUS AND LT. FELD ALT SECTIONS. (MANY PINKISH) OCCASSIONAL MASS		5											
127							8											
128					MOD GOUGE @ 5-10°.		17											
129					128.9 - 129.2 V - CORE SHATTERED TO STRONG GOUGE.		14											
130							8		5.1	90								
131							15											
132							6											
133							4											
134							17											
135					135.2 - MANGANESE STAINED FRACTURE @ 10-15°.		59		5.2	92								
136							28											
137					136.7 - 136.9 - WK GOUGE		220											
138					138.3 - 141.4 - CORE VERY SILICEOUS W SCATTERED ALOAS OF CHLORITE ALT. Py (DIS + BLEBS) ≤ 5% TRACE Mo.		76											
139																		
140																		
141																		
142					STRONG BRECCIA DT7-CARB HEALED		49		5.5	96								
143																		
144					139.7 - 145.3 - SILICIFIED W LOW - MOD STRINGERS. Py ≤ 2% LOCALLY TO 5%													
145							16											
146					145.3 - STRONGLY SILICEOUS. OCCASSIONAL VUGGY DT7 CARB. VEINS. Py ≤ 2%.													
147							14		4.8	93								
148																		
149					50cm DT7 VEIN @ 5-10° Py 1%.													
150																		

119.6 - 145.5 - Rf BRECCIATED AND HYDROTHERMALLY ALTERED. DT7-CARB AND CARB. VEINS COMMON. CORE MILKY TO LT-GREEN. GENERALY SOFT IN SOME SILICEOUS SECTIONS. Py 2-3%.

145.5 - 161.85 Rf MED - DK GREY. EXTREMELY SILICEOUS. SCATTERED PATCHES OF DK GREEN CHLORITE ALTERATION. DIS Py 3-4%

34819	1.0	36	723	8	43	0.2
34820	1.0	35	1149	11	60	0.4
34821	1.4	25	885	2	49	0.4
34822	1.0	29	1005	5	67	0.2
34823	1.0	72	364	8	57	0.2
34824	1.0	38	478	7	63	0.3
34825	1.0	40	390	7	51	0.2
34826	1.0	40	745	12	65	0.4
34827	1.0	32	861	12	54	0.5
34828	1.0	44	1252	8	55	0.6
34829	1.0	32	1646	6	44	1.1
34830	1.0	64	1430	2	46	0.8
34831	1.0	22	834	8	50	0.6
34832	1.0	49	261	6	34	0.2
34833	1.0	196	633	4	51	0.3
34834	1.0	65	1911	8	42	0.5
34835	1.0	80	930	16	55	0.3
34836	1.3	56	3484	2	47	0.8
34836	2.7	80	1226	3	41	0.5
34837	2.0	56	1353	9	41	0.5
34838	3.0	57	766	7	47	0.4
34839	3.0	16	536	9	37	0.3

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SECTION	ALTERATION (Silica)	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES Au ppb	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT. Mo	ESTIMATED ppm Cu	Pb	Zn	Ag
150					COMMENTS: AVE CORE REC'Y / HOLE										
151						23			34840	3.0	34	86	9	42	0.5
152					152.0-153.4 - CORE WELL FRACTURED W/ CALCITE ON FRACTURE SURFACES										
153						15	5.2	89	34841	3.0	16	280	2	41	0.1
154															
155					QTZ VEIN ≤ 4mm @ 80°. Py ALONG CONTACTS. WK LEACHING SURROUNDING VEIN.										
156															
157					QTZ VEIN 12-15mm @ 80°. MINOR CALCITE. GREENISH WAXY MATERIAL (PARAGONITE?) IN WALL RX.	18	5.5	96	34842	3.0	47	294	8	38	0.2
158															
159															
160					159.5-159.8 - WK LEACHED W/ BLEBS OF WAXY GREEN PARAGONITE.	10			34843	3.0	30	326	25	48	0.2
161															
162															
163					162.8-163.1 - QTZ STRINGERS @ 5-45° SURROUNDED BY WK LEACHED WHITE RX. STRINGERS	12	5.4	100	34844	3.0	1	152	10	32	0.3
164															
165															
166					10cm BRECCIA @ 30° SHEARED	10			34845	3.0	3	124	5	29	0.3
167					167.2-169.3 - LEACHING ZONE W/ Py STRINGERS 5-6%.										
168					10cm QTZ VEIN @ 10-15° Py 5-10%.	14	5.7	95	34846	3.0	3	153	10	30	0.2
169					168.6-169.0 - CREEK @ 45°										
170					5mm QTZ VEIN @ 35°										
171															
172						21			34847	3.0	49	257	2	41	0.2
173					12cm STRONG [illegible]										
174					15cm STRONG EDAS @ 5-10° 5cm QTZ VEIN, JUNK MINERALS [illegible]	8	5.6	95	34848	3.0	3	70	5	21	0.3
175															
176															
177															
178					0.01m WK-MOD GOUGE	10			34849	3.0	1	51	6	24	0.3
179					5-10cm STRONG @ [illegible]										

161.85-165.4 - RX BECOMES DK. GREY TO BLACK. STILL EXTREMELY SILICEOUS. Py (DISS + ON FRACTURES) 2-4%. GREEN CHLORITIC BLEBS CONTINUED THROUGHOUT @ 5-10%. OCCASIONAL BLEB APPEARS TO HAVE A HORNBLENDE-LIKE X SECTION. POSSIBLY ORIGINALLY A PORPHYRY. WK TO MOD CALCITE ON FRACTURE SURFACES.

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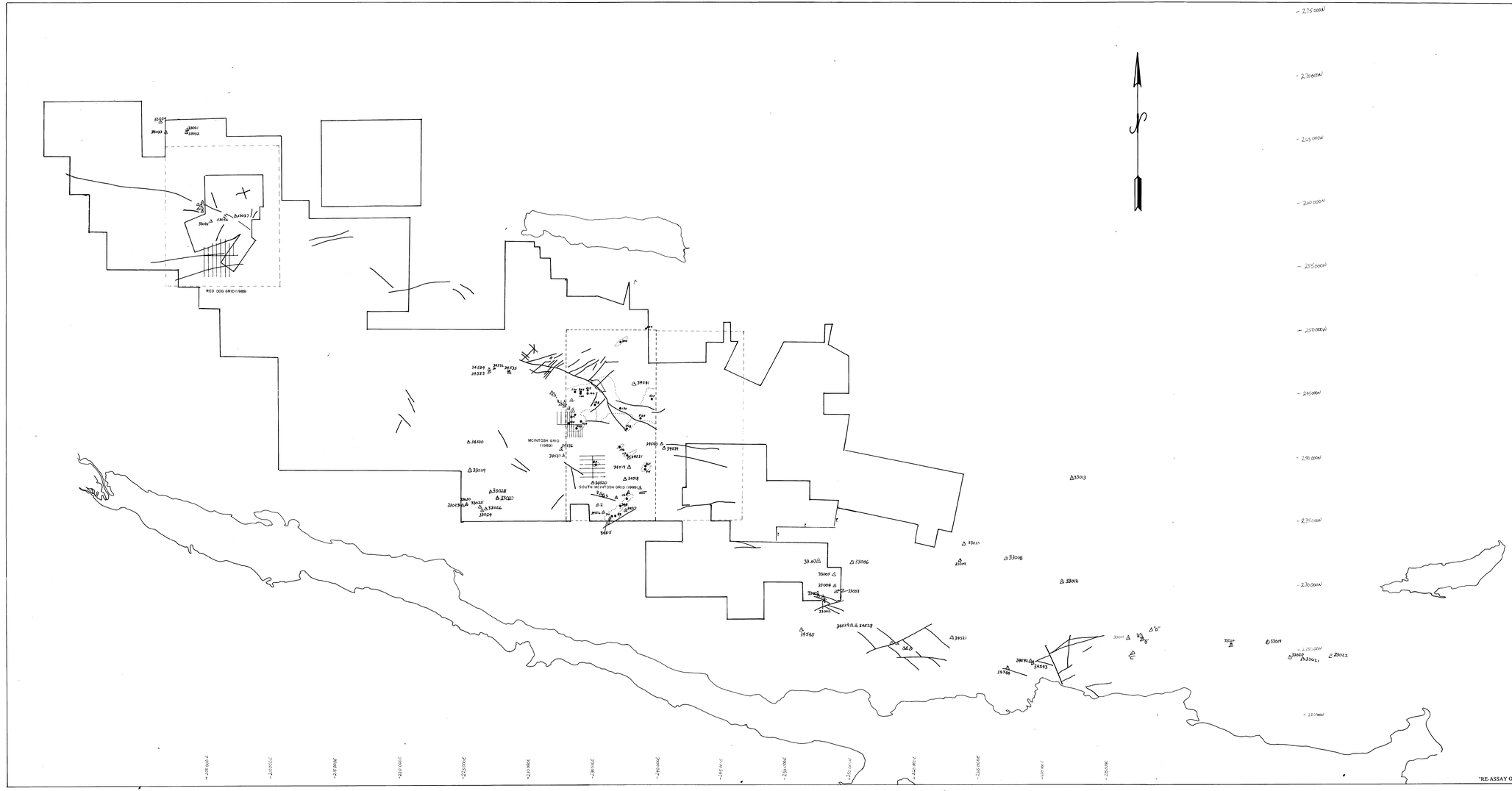
SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED ppm Mo	Cu	Pb	Zn	Ag
180							Amt ppb										
181																	
182					182.73 - SLICKENSIDES @ 45°		15	5.5	98	34650	3.0	1	78	4	24	0.1
183					1832-1833 - STRONG SHEAR												
184					1836-1837 - STRONG SHEAR		20			34651	2.0	8	227	278	378	0.4
185					PORPHYRY QTZ-CARB VEINED		7	5.4	86	34652	2.0	3	119	17	42	0.2
186																	
187					RX SHEARED BUT COMPETENT. Py 5-10%. 1-5% WAVY PYRRHH. QTZ-CARB 25-30%		14			34653	1.0	7	175	21	33	0.1
188							36	.66	83	34654	1.06	24	646	39	53	0.3
189					EOH 188.06												
190																	



GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,386

"RE-ASSAY OF SAMPLES COLLECTED BY BHP-UTAH MINES LTD. IN 1968"

MORAGA RESOURCES LTD.

EXPO PROJECT
NANAIMO MINING DIVISION, B.C.

REGIONAL SAMPLE LOCATIONS & GRID LOCATION MAP

DAIWAN ENGINEERING LTD.

SCALE	DATE	NTS.	FIG.
1:50,000	SEPT., 1989	92L/12	6