

# Ministry of Energy, Mines and Petroleum Resources GEOLOGICAL SURVEY BRANCH

# ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]		TOTAL COST
2005 Geological, Geochemical, Geophysical and Diamond I	Drilling Report on the Rupert Property	\$396,115
AUTHOR(S) <u>Darcy E.L. Baker</u>	SIGNATURE(S)	
NOTICE OF WORK PERMIT NUMBER(S) /DATE (S)	05-1610019-1013	YEAR OF WORK 2005
STATEMENT OF WORK - CASH PAYMENT EVENT CONNECT01)	NUMBER(S)/DATE(S) 4075455 (m	o claims), 4075505 (FILL 12,
PROPERTY NAME Rupert		
CLAIM NAME(S) (on which work was done_) mo 1 to	o 19, FILL 12, CONNECT01	
COMMODITIES SOUGHT Cu, Au, Mo		<u> </u>
MINERAL INVENTORY MINFILE NUMBER(S), IF KN	IOWN	<del>-</del>
MINING DIVISION Nanaimo	NTS 092L/12	-
LATITUDE _ <u>50</u> ° 40 <u> ' 00</u> " LONG	GITUDE <u>127</u> ° 55 <u> ' 00</u> " (at centre o	f work)
OWNER(S)		
1) Lumina Resources Corp	_ 2)	
MAILING ADDRESS	_	
1550 – 625 Howe St.	_	
V DO	_	
V6C 2T6	_	
OPERATOR(S) [who paid for the work]		
1) Lumina Resources Corp	_ 2)	
MAILING ADDRESS		
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Vancouver, B.C.	<u> </u>	
V6C 2T6		
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratig	graphy, structure, alteration, mineralizati	on, size and attitude):
Island Copper, Hushamu deposit, porphyry, Islan Hills, NW Expo, Expo Property	nd Intrusion, Bonanza volcanics,	Vancouver Island, Pemberton
REFERENCES TO PREVIOUS ASSESSMENT WORK AND 15884, 15707, 11460, 15024, 15077, 15367, 165		ARs 2659, 1681, 14393, (OVER)
		(0 1 1 1)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. Support)
GEOLOGICAL (scale, area	a)		
Ground, mapping			
Photo interpretation _			
GEOPHYSICAL (line-kilon	netres)		
Ground			
Magnetic			
Induced Polarizatio	n		
Radiometric			
	670 line-km	<u>all</u>	\$48,830
GEOCHEMICAL			
(number of samples analys	sed for)		
	146		
	data compilation		
DRILLING			
(total metres; number of ho	oles, size)		
Core	1108 metres NQ core, 8 holes		\$187,17 <u>4</u>
Non-core			
RELATED TECHNICAL			
Sampling/assaying			\$35,000
Petrographic			
PROSPECTING (scale, ar	rea)		
PREPARATORY/PHYSIC			
Line/grid (kilometres)			
Topographic/Photogr		<u> </u>	
	,area)		
	kilometres)/trail		
•	,		
	netres)		
		TOTAL COST	<u>\$396,115</u>

# Lumina Resources Corp.

# 2005 GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL AND DIAMOND DRILLING REPORT ON THE RUPERT PROPERTY

Volume I - Text

Located in the Northern Vancouver Island Area Nanaimo Mining Division NTS 092L/12 50° 40' North Latitude 127° 55' West Longitude

-prepared for-

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May, 2006

### i

### **SUMMARY**

The Rupert mineral property was evaluated by several techniques for possible porphyry copper-gold-molybdenum deposits. The proximal Island Copper Deposit – a historic producer located 3.8 km west of the Rupert property boundary – along with several other nearby deposits (e.g. Hushamu, Red Dog) make this property prospective. Although it has previously been explored, particularly during the waning stages of Island Copper mine life, the very poor exposure of the area precludes completely writing off the area. Indeed, previous drilling intercepted anomalous copper and molybdenum mineralization associated with intrusive rocks similar to those at Island Copper.

A helicopter-borne geophysical survey was conducted across the entire property area and the data was evaluated by a geophysical consultant. A three by three kilometre target area was selected as prospective based on resistivity and magnetic patterns. Subsequently, soil samples were collected across this area from a detailed grid. Soil samples were analysed by two separate analytical methods, including a selective leach method which, in certain conditions, is able to "see" through thick overburden by testing for scavenged mobile metal ions. In all, 146 samples were collected. Eight NQ-sized drill holes for 1108 metres were drilled to test the target area.

All drill holes intersected volcanic rocks of the Bonanza Volcanics. No significant mineralization was encountered but evidence of a hydrothermal system was observed. Locally moderate to strong epidote, sericite, silica, hematite and magnetite alteration were all observed and wide intercepts of 3-5% pyrite are present. These styles are consistent with distal parts of porphyry systems and indicate that a poorly understood system is present beneath thick overburden. The selective leach soil technique employed is probably not appropriate for this area. An orientation survey across the Hushamu deposit indicates that standard analytical techniques and the selective leach work equally as well, but neither works above overburden greater than about 20 metres thick.

Although the 2005 drilling failed to intersect potentially economic mineralization, the new information obtained points to a hydrothermal system that is largely unknown. Drilling to date has been almost exclusively from road sites out of convenience. Further drilling could be completed away from existing roads to further test the geophysical target delineated from the 2005 airborne survey.

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### 1.0 INTRODUCTION

The Rupert Property is an E-W-trending group of mineral claims 20 km long and 5.5 km wide stretching from the east end of Rupert Inlet 20 km southeast of Port Hardy, British Columbia (Figure 1). The Island Copper mine which saw production between 1971 and 1994 is located about three kilometres west of the Rupert Property. The property is almost entirely overburden-covered but was explored between the late 1960s and 1993 – the last year a major exploration program was completed in the area. In 2005, Lumina Resources Corp flew an airborne survey across the area and conducted soil sampling followed by diamond drilling. Equity Engineering Ltd. was contracted to execute the exploration programs and has been retained to report on their results.

### 2.0 PROPERTY TITLE

The Rupert Property comprises 21 mineral claims staked in March and May, 2005 via the Mineral Titles Online system (Table 1). The property area totals 9704 hectares and all claims are held by Moraga Resources Ltd., a subsidiary of Lumina Resources Corp.

Table 1: Rupert Property Claims

Mineral	Name	Area (Ha)	Expiry Date
Tenure		, ,	
509465	mo 1	492.27	2006/MAR/23
509466	mo 2	492.52	2006/MAR/23
509467	mo 3	492.26	2006/MAR/23
509468	mo 4	492.52	2006/MAR/23
509469	mo 5	492.26	2006/MAR/23
509470	mo 6	492.51	2006/MAR/23
509471	mo 7	492.26	2006/MAR/23
509472	mo 8	492.52	2006/MAR/23
509474	mo 9	492.26	2006/MAR/23
509475	mo 10	492.52	2006/MAR/23
509476	mo 11	492.26	2006/MAR/23
509479	mo 12	492.52	2006/MAR/23
509480	mo 13	492.25	2006/MAR/23
509481	mo 14	492.52	2006/MAR/23
509482	mo 15	492.24	2006/MAR/23
509483	mo 16	492.51	2006/MAR/23
509485	mo 17	492.23	2006/MAR/23
509486	mo 18	492.51	2006/MAR/23
509487	mo 19	492.37	2006/MAR/23
512103	FILL 12	123.05	2006/MAY/05
513183	CONNECT01	225.53	2006/MAY/22
	T - 4 - 1	0700 00	1

Total 9703.89

### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Rupert Property is located within the northern Vancouver Island area, centred approximately at latitude 50°36' and longitude 127°19' and is covered by NTS map sheet 092L/12. Topography of the property is characterized by low, flat, till covered areas with very subtle relief. Elevations range from

sealevel to 120 m. Vegetation comprises a mix of second- and first-growth forest of fir, hemlock, spruce and cedar. Logging has been active across the property for several decades so second growth areas are highly variable in terms of age, density and ease of access. Approximately 50% of the property area has been clear cut.

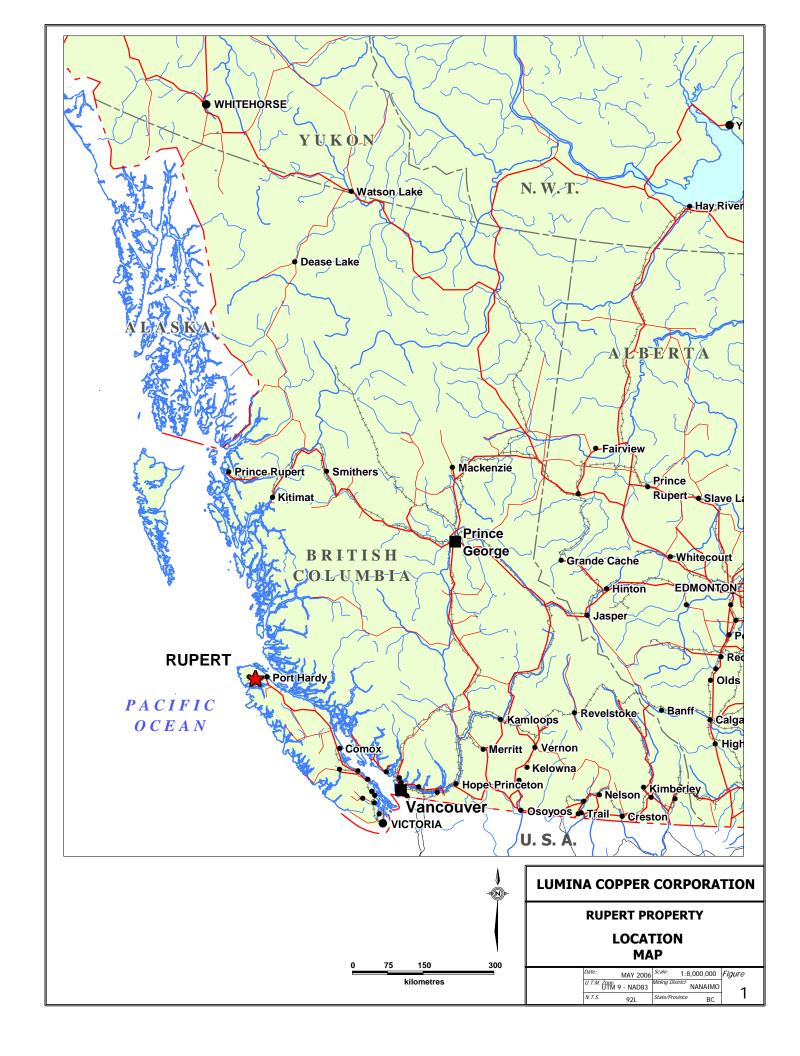
Climate is typical of coastal areas of British Columbia with an average annual rainfall in nearby Coal Harbour of 203 cm (Environment Canada online data). Monthly precipitation varies from a low of 4.7 cm in July, to a high of 32.7 cm in November. Temperatures are generally moderate at sealevel with average daily minimum temperatures not lower than 0° at Coal Harbour.

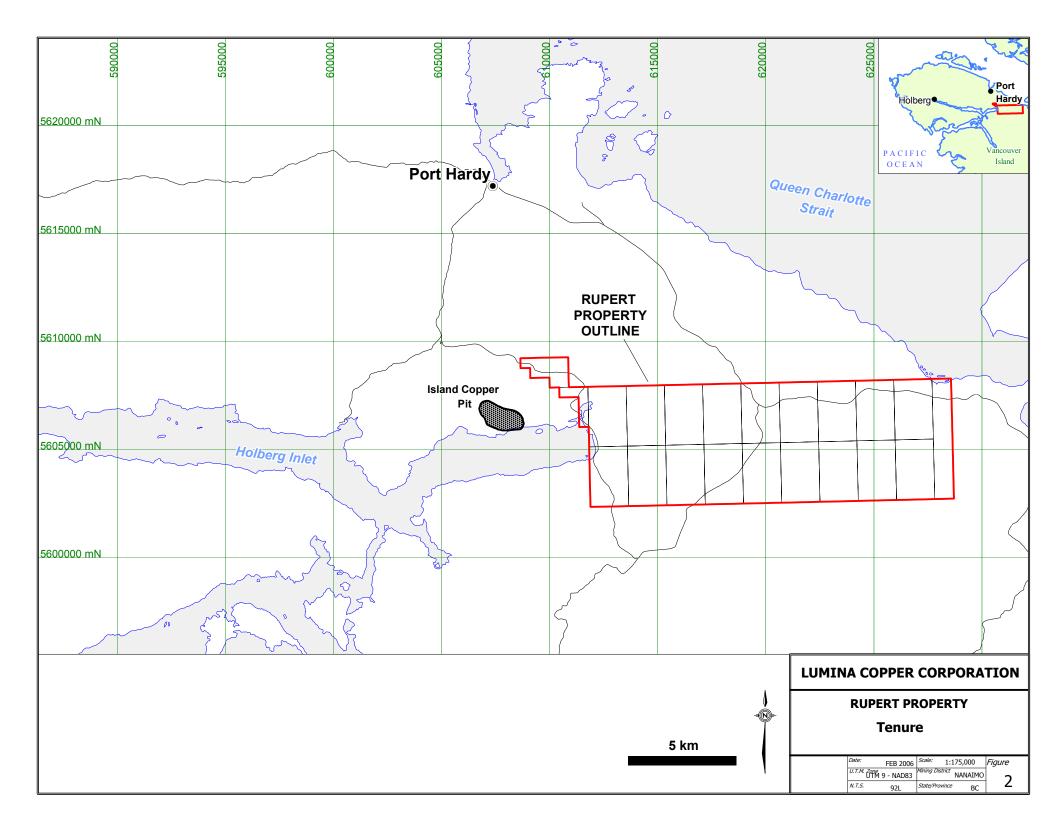
An expansive network of logging roads provides good access to most areas of the Rupert Property. These roads exhibit a wide range of conditions, however, with the worst being completely impassable to vehicles. A few roads have been completely rehabilitated. Several roads have been constructed in the past few years and road building related to logging activities is on-going. The Island Highway (Route 19) cuts through the eastern part of the property. Port Hardy is about a 20 minute drive to the north along this route.

### 4.0 PROPERTY EXPLORATION HISTORY

In 1962, the British Columbia Department of Mines and the Geological Survey of Canada jointly flew an airborne magnetic survey covering the northern part of Vancouver Island. This survey delineated a belt of north-westerly-trending magnetic highs north of Holberg and Rupert Inlets. Considerable exploration of these anomalies ensued, mostly focused on skarn-type iron deposits. During 1963 and 1964 several programs, mainly of stream sediment sampling, were conducted by numerous companies. No significant discoveries were made, however, and by 1965 very little interest was shown in the region (Muntanion and Witherley, 1982).

Things changed, however, with the discovery of the Island Copper Mine located 3.5 km west of the current Rupert Area boundary as described by Perelló et al. (1995). A local prospector named Gordon Melbourne staked a magnetic anomaly at Bay Lake near the eastern end of Rupert Inlet and in 1965 discovered chalcopyrite in float, then the bedrock source by trenching. Utah Construction and Mining Co. (Utah) optioned the property in January, 1966 and immediately began a program of mapping, soil sampling and ground geophysics, quickly followed by drill testing beginning in the spring of 1966. The discovery hole – the eighty-second of the program – was drilled in February, 1967 and intersected an 88 m interval grading 0.45% Cu. This was the first deep, follow-up hole drilled. This deposit was developed into the Island Copper Mine, with production beginning in October, 1971 and continuing until December, 1995. The mine produced 345 million metric tonnes (t) of ore with average grades of 0.41% copper, 0.017% molybdenum, 0.19 g/t gold and 1.4 g/t silver (Perelló et al., 1995).





# 4.1 Previous Work

Table 2 summarizes all known exploration work carried out on the area comprising the Rupert property.

**Table 2: Rupert Exploration History** 

Program/Zones	Geochemistry	Geophysics	Drilling	Reference
1967 - 1970 Ballind				
Expo, Opex, Lorri	1210 soil samples	39.9 line-km IP, 56 line-km mag.		(Baird, 1970; Baird, 1968; Singhai, 1970b)
1974-1980 Utah				
East 86 Group			12 DDHs (R-01 to 12) for 1561.8m BQ; 545.6m NQ	(Kaiway, 1974; Lamb, 1976, 1977, 1980a, b)
Prior to 1982 Unkno	wn			
			23 DDHs (C-31, C-98, C-99, C-312 to 314, C-330 to 333, BC-01, BC-03 to 14), at least 14 DDH prior to 1970	Location recorded on 1982 report map (Fleming et al. 1983), and mentioned in (Singhai, 1970a)
1981 – 1982 Utah				
East 86 Group		124.8 line-km IP/Res., VLF- EM, and mag.		(Fleming et al., 1983)
1983 – 1984 Utah				
East 86 Group			4 DDHs (R-013 to 016) totalling 555.0m of NQ	(Clarke, 1986a; Fleming, 1983b; Holland and Fleming, 1984)
1985 Utah				
East 86 Group	1713 soils		1DDH R-017 totalling 169.5m of NQ	(Clarke, 1986a; Fleming, 1985a)
1986 Utah				
East 86 Group	2159 soils, select 1985 soils re- analyzed		1 DDH R-018 totalling 305m	(Clarke, 1986b, c; Fleming, 1986a, b, 1987; Fleming and Clarke, 1987)
1988 Utah East 86 Group	72 soils, 48 pit samples			(Fleming, 1988)
1993 Utah East 86 Group			3 DDHs (R-019 to 021) totalling 648.3m of NQ	(Fleming, 1993)
Totals	5154 soils, 48 pit samples	Ground: mag., IP/Res., VLF-EM	43 DDHs total meterage unknown	

### 4.1.1 Riviera Mines and Ballinderry Exploration 1967 to 1970

In 1967, Utah staked 661 claims along strike from the Island Copper deposit and named it the Expo Property after the World's Fair hosted in Montreal that year. This included a large portion of the western half of the current Rupert Property. Records of work done on claims by other companies during this time is incomplete likely due to selective filing for assessment credits.

In 1968 Riviera Mines Ltd. performed a 6.3 line-km IP survey on parts of the Expo and Har claim groups south of Rupert Inlet (Baird, 1968). Areas of weakly anomalous chargeability were delineated on the Expo claims.

In 1969 Ballinderry Exploration obtained parts of the Expo claim block and conducted a 33.6 line-km IP survey, collected 1210 soil samples which were analysed for copper and completed a 56 line-km magnetometer survey (Baird, 1970; Singhai, 1970b). Two east-west trending steeply-dipping magnetic anomalies were identified and attributed to granite dykes with pyrrhotite, pyrite, and chalcopyrite mineralization.

### 4.1.2 Utah 1974 to 1984

By 1974 Utah had re-acquired and consolidated the Expo claims east of Rupert Inlet. Utah drilled five BQ diamond drill holes totalling 888.2m (holes R-001 to R-005) in the summer of 1974. The drilling was presumably to test previously identified geophysical and geochemical anomalies attributed to the Rupert Stock, although the intention is not stated (Kaiway, 1974). Six more holes were drilled between 1976 and 1980 (R-006 to R-012) totalling 545.6 m of NQ and 673.6 m of BQ. No mention of significant mineralization is mentioned in any of the reports covering this period (Lamb, 1976, 1977, 1980a).

Exploration efforts were renewed in 1981 and a two year program of ground geophysical (IP / resistivity, mag., VLF-EM) and soil geochemical surveys was undertaken with 124.8 line-km of ground geophysics completed. Three geophysical trends were delineated (Clarke, 1983; Fleming et al., 1983):

- The Dyke Trend originally known as anomalies 81-8, 81-9, 81-11, and 82-1, this group
  of east-west trending chargeability highs and associated magnetic highs has been
  attributed to porphyritic dykes extending eastward from the Rupert Stock.
- Quatsino Trend Comprising chargeability anomalies 81-12 and 82-3, that are located near the inferred contact with Quatsino Limestone to the north and is interpreted to be related to skarn in the limestone. The anomaly is partially contained within the Rupert Property.
- M-1 Anomaly A small, low-amplitude magnetic high in the southern part of the claim block.

Another trend called the Parson Bay Trend was identified but attributed to pyrite mineralization in Bonanza Group volcanic rocks and was ignored as an exploration target. Subsequent drilling in 1983 and 1984 (DDHs R-013 to -016, totalling 555.0 m of NQ) tested the strike length of the Dyke Trend. All diamond drill holes confirmed the presence of the Rupert Stock-like intrusive rocks and holes R-014 and R-015 returned anomalous copper and molybdenum (30 feet of 0.12% Cu, 0.048% Mo and 10 feet of 0.10% Cu, 0.008% Mo, respectively).

### 4.1.3 Utah 1985 to 1993

Diamond drilling of the Dyke Trend chargeability anomalies continued in 1985 with one drill hole, R-017, on the far east of the anomaly (Clarke, 1986a). This intersected Parsons Bay Formation from top to bottom and so closed off the eastern extent of the Rupert Stock. The following year the M-1 low-amplitude magnetic anomaly was tested with diamond drill hole R-018 (Clarke, 1986b). The hole intersected magnetite alteration with higher than normal magnetic susceptibility (relative to other data from the same unit). The magnetite alteration was interpreted to be the cause of the M-1 anomaly.

Contemporaneous with the diamond drilling discussed above, a large soil geochemistry survey was undertaken around (Clarke, 1986c; Fleming, 1985a, b, 1986a, b). The survey consisted of 2559 samples with about every second sample being analyzed for copper, molybdenum, lead, zinc, gold, silver, arsenic, and manganese (2435 samples) and 30 element ICP (124 samples + unknown number rerun from 1985 survey). The geochemical survey returned weak anomalies across most of the area except for some anomalous values of Zn, Cu, Au, Mo, and As in the western portion of the survey centered on hole R-017. Further drilling was recommended.

In early 1988 a follow-up geochemical survey was performed taking 48 samples from shallow (0.3 to 1.0 m deep) pits and 72 line samples (Fleming, 1988). Samples from pits 15 and 16 returned anomalous values including 0.06% Mo, 0.13% Cu, 0.75% Zn and 1.1 g/t Au. Further trenching and drilling was recommended for this area. It was not until 1993 that the area would again see drilling. The drilling included a final three holes, one in each of the main areas of previous concern, the far-east anomaly (R-019), the M-1 anomaly (R-020), and the Rupert Stock in the northwest of the property (R-021) (Fleming, 1993). All three holes resulted in low geochemical values and no further drilling was recommended.

# 4.2 2005 Exploration Program

Ground-based exploration on the Rupert property was conducted during September through December, 2005 following a helicopter-borne geophysical survey completed in May. Jan Klein identified a porphyry copper-gold target on the Rupert property, based on magnetic and resistivity patterns (Klein, 2005a). Outcrop exposure is very limited and glacially-derived overburden reaches depths exceeding 200m. Since no outcrop data was attainable, 138 soil samples were collected across the geophysical target area along north-south oriented grid lines. Given the potentially thick overburden, soil was analysed for 63 elements via ICPMS following digestion in a hot (60°C) hydroxylamine hydrochloride leach. This selective leach method aims to overcome the problems of thick transported overburden by dissolving amorphous hydrous iron oxide which can be an effective scavenger of mobile metal ions.

Subsequently, eight NQ drill holes (R-022 to R-029) were drilled within the main target area for 1108.7 metres. Drill core was logged, sawn and sampled at a temporary core tent constructed at Port Hardy Bulldozing in Port Hardy, BC. Core logs were created using Lagger software from data entered directly into the Lagger databases. Magnetic susceptibility data was collected from all drill core by taking three readings within every drill run and averaging the value. Magnetic susceptibility data are presented on drill logs. For every 60 samples, one randomly selected sample was quartered and re-sampled as part of the QA/QC program. Standards and blank material samples were each inserted at a frequency of one in 30 samples. All core is stored at the long term storage racks at Port Hardy Bulldozing. Driftwood Diamond Drilling Ltd. of Smithers, British Columbia conducted the drilling using their Longyear 38 skidmounted drill with NQ-sized tools. All drill sites were accessible by Western Forest Products logging roads.

Soil grid locations were obtained by hand held-GPS and lines were run using compass and hipchain. A magnetic declination of 20°9'E was used for all compass measurements. All maps and UTM coordinates are referenced to the 1983 North American Datum (NAD-83). A total of 138 soil samples were collected in 8 person-days. A field duplicate soil sample was collected about every 20<sup>th</sup> sample and sample blanks were inserted every 40<sup>th</sup> sample (Appendix G). Soil sampling sites were marked with orange and blue flagging tape and a weather- and fade-proof Tyvex tag.

Core samples were analyzed by ALS Chemex Labs of North Vancouver for Au (fire assay) and 25-elements by HF-HNO<sub>3</sub>-HCIO<sub>4</sub> acid digestions, HCI leach and ICPAES. Soil samples were analyzed by ALS Chemex Labs of North Vancouver for Au (fire assay) and 34-elements by aqua regia acid digestions and ICPAES. Additionally, the soil samples were also analysed for 63 elements via ICPMS following digestion in a hot (60°C) hydroxylamine hydrochloride leach. Copies of laboratory certificates are reported in Appendices E.1 and E.2. The procedures, results and conclusions of the sampling QA/QC program are summarized in Appendix F.

### 5.0 REGIONAL GEOLOGY

The most recent description of the regional geology of the Rupert area is given by Nixon et al. (2006) and the following summary is taken predominantly from Nixon's paper and references therein. Figure 3 shows the bedrock geology of northern Vancouver Island.

Vancouver Island is comprised of Upper Paleozoic to Lower Mesozoic rocks of Wrangellia – a tectonostratigraphic terrane that occurs discontinuously northward as far as central Alaska. This terrane was amalgamated to the Alexander Terrane of the Alaskan Panhandle (together comprising the Insular Superterrane) by Late Carboniferous time. Subsequently, these terranes were accreted to North America between the Middle Jurassic and the mid-Cretaceous. Thus, Vancouver Island records an early allochthonous history, and a later history with commonality to the North American margin.

The pre-accretion history of Wrangellia is represented by the Paleozoic Sicker Group and the Middle Triassic Karmutsen Formation. The Sicker Group comprises marine Devonian to Early Permian volcanic and sedimentary rocks that host VMS deposits such as at Myra Falls. The Karmutsen conformably overlies the Sicker Group and comprises basaltic and minor sedimentary rocks that underlie about 50% of Vancouver Island. This unit is up to 6000 m thick. Richards et al. (1991) argued that the Karmutsen was initiated by, and extruded above a mantle plume and recent geochemical data support an oceanic plateau origin for the Karmutsen (Greene et al., 2006). The Karmutsen is in turn conformably overlain by the Quatsino Formation of limestone consistent with a period of quietude following impingement of a mantle plume.

The Bonanza Arc (DeBari et al., 1999) formed along the length of Vancouver Island during accretion of Wrangellia. Owing to later tiling, products of this arc from various crustal depths are all preserved. These include the Westcoast Crystalline Complex, Island Intrusions and the Bonanza Group volcanic rocks. DeBari et al. (1999) argue that all these components have similar ages and geochemical signatures and that they are therefore all products of a single arc. Ages for these rocks range from ca 190 to 169 Ma. Plutonic rocks of the Island Intrusions are responsible for porphyry copper mineralization on Vancouver Island.

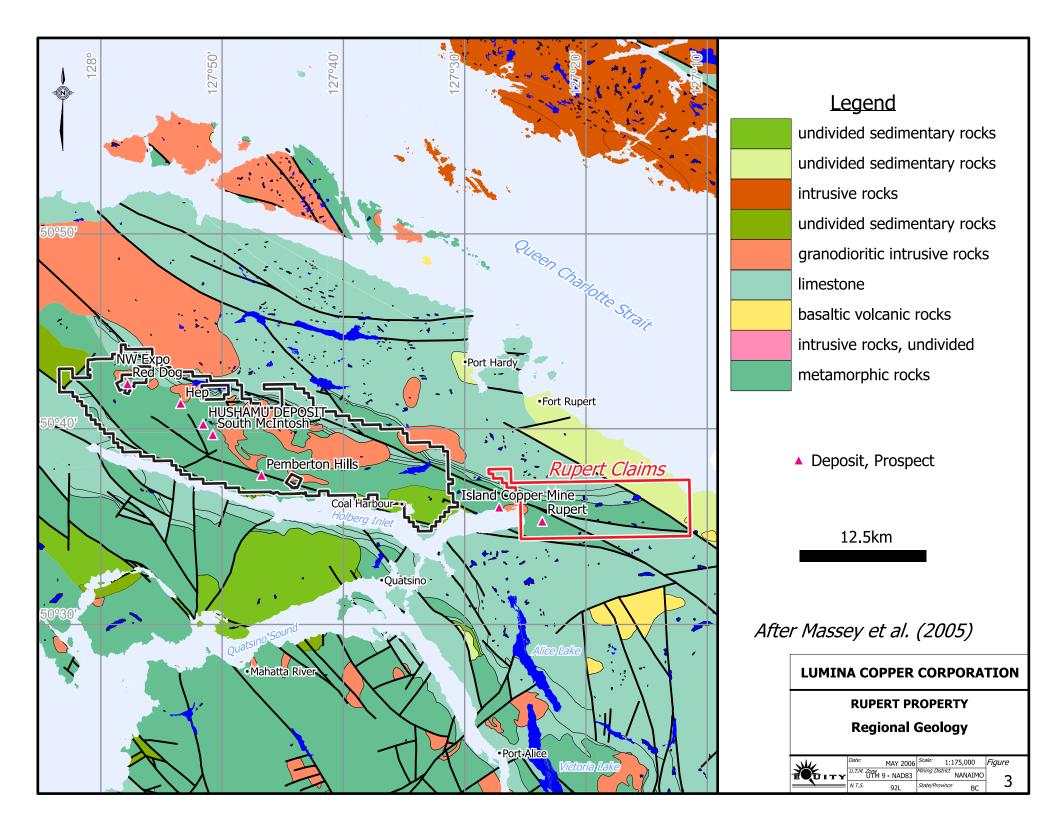
### 6.0 PROPERTY GEOLOGY

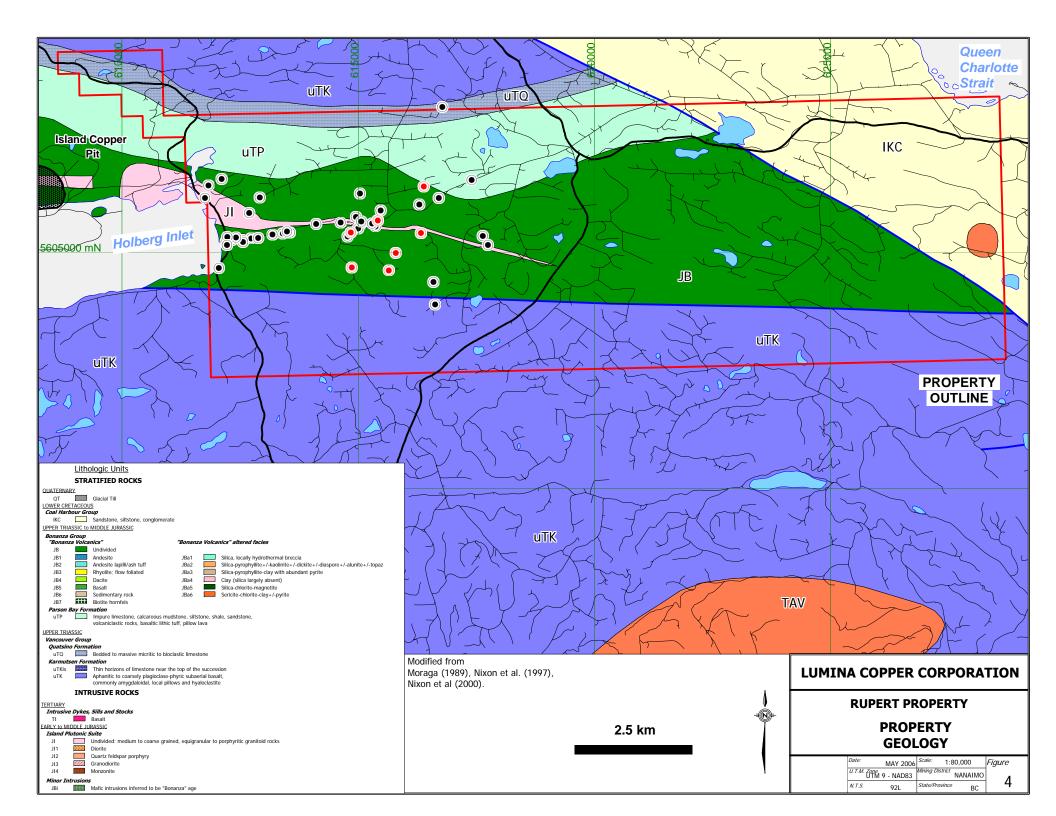
# 6.1 Lithology

The following geological description of the Rupert Property is summarized from a compilation map by (Fleming, 1983a) and from the map by (Nixon et al., 2000). The property is underlain by a generally southward-younging sequence of east - west-trending upper Triassic to middle Jurassic volcanic and lesser sedimentary rocks belonging to the Vancouver and Bonanza Groups (Figure 4). Table 3 summarizes the characteristics of these rock units. The northern part of the property is underlain by mafic volcanic rocks of the Karmutsen Formation. These thickly bedded to massive flows form the topographically highest points in this part of Vancouver Island.

Immediately to the south, the Karmutsen is conformably overlain by the Quatsino Formation of fine-grained (micritic), massive to weakly bedded grey limestone. In this area, the Quatsino Formation is approximately 100-200 m thick. Lying above the Quatsino Formation is the Parson Bay Formation comprising thinly-bedded siltstone and mudstone on the Rupert Property.

Most of the core of the Rupert Property is underlain by "Bonanza" volcanic rocks that occur above the Parson Bay rocks. These generally comprise a monotonous sequence of massive andesitic volcanic rocks but in drill core local well-bedded tuffaceous units were encountered. Owing to displacement across the Rupert Fault, the Karmutsen is also exposed along the southern part of the property.





The northeast corner of the property is underlain by a fault-bound, unconformably overlying clastic wedge of Upper Cretaceous sedimentary rocks correlative to the Nanaimo Group.

The core of the property is intruded by a series of east-west dykes interpreted to be apophyses emplaced eastward from the Rupert Pluton. This granodiorite body crops out at the northeast corner of Rupert Inlet, immediately east of the Island Copper Mine. The Rupert Pluton is part of the Jurassic Island Plutonic suite responsible for porphyry Cu-Au-Mo mineralization at Island Copper.

# **Table 3: Rupert Lithologic Units**

### STRATIFIED ROCKS:

### **QUATERNARY**

QT gravel, boulder till, local mud-rich laminated till

### **UPPER CRETACEOUS**

# **Nanaimo Group**

uKN Sandstone, siltstone, conglomerate, minor coal

### **UPPER TRIASSIC to MIDDLE JURASSIC**

# **Bonanza Group**

# "Bonanza Volcanics"

- JB Undivided volcanic rock
- JB1 Andesite: green, variably massive / coherent facies, feldspar-phyric, hyaloclastite breccia common
- JB2 Andesite lapilli and/or ash tuff: green, volcaniclastic facies comprising angular to rounded coarse ash to block-sized fragments, locally fine-grained ash size, local charred wood fragments
- JB3 Rhyolite: coherent and volcaniclastic facies
- JB4 Dacite
- JB5 Basalt
- JB6 Sedimentary rocks: undivided
- JB7 Hornfels, biotite-rich contact metamorphosed Bonanza volcanic rocks

# **Parson Bay Formation**

uTP Impure limestone, calcareous mudstone, siltstone, shale, sandstone, volcaniclastic rocks, basaltic lithic tuff, pillow lava

# **UPPER TRIASSIC**

# Vancouver Group

### **Quatsino Formation**

uTQ Bedded to massive micritic to bioclastic limestone

### Karmutsen Formation

uTKIs thin limestone horizons near top of succession

uTK Aphanitic to coarsely plagioclase-phyric subaerial basalt, commonly amygdaloidal, local pillows and hyaloclastite breccia

# Table 3 (con't): Hushamu Lithologic Units

### INTRUSIVE ROCKS:

### **TERTIARY**

### Intrusive dykes, sills and stocks

TI Basalt, medium-grained weakly to unaltered with chilled margins

### EARLY TO MIDDLE JURASSIC

### Island Plutonic Suite

- JI Undivided: medium to coarse-grained, equigranular to porphyritic granitoid rocks
- JI1 Diorite
- JI2 Quartz-feldspar porphyry
- JI3 Granodiorite
- JI4 Monzonite

### **Minor Intrusions**

JB1 Mafic intrusions inferred to be "Bonanza" age

### 6.2 Structure

The layered units underlying the Rupert Property generally dip gently to steeply southward, although bedding orientation data are very rare. Deformation of the area has been described by Nixon et al. (1994) and is summarized below.

# Phase 1: Post-Early Jurassic to Pre-Cretaceous Deformation

The first deformational event is related to an east-northeast directed compressional event that resulted in regional tilting of the Lower Jurassic and older strata to form the Victoria arch. In addition flexural slip folding and the development of northwesterly trending thrust faults occurred during this deformation event. Northeast directed compression is indicated by the presence of locally well developed, northwesterly striking, stylolitic cleavage in the Quatsino limestone.

## Phase 2: Post-Mid to Pre-Late Cretaceous Deformation:

The second deformational event postdates deposition of the mid-Cretaceous Coal Harbour Group sediments and may predate deposition of the Upper Cretaceous Nanaimo Group. Northerly directed compression resulted in an episode of intense strike-slip faulting and lesser thrusting. Faults formed during this deformation event are dominantly northwesterly trending structures that have in many cases produced significant drag folding in adjacent strata where the units are well bedded. The most obvious northwesterly trending faults are high-angle dextral strike slip faults with a south-side up sense of motion. It is the presence of this generation of faults that cause most of the stratigraphic repetitions that occur in the map area.

The Holberg fault is a curvilinear south-side up thrust fault that formed during this second deformational event in response to northward directed stresses. This important structure places Upper Triassic strata on the south side of Holberg Inlet adjacent to mid-Cretaceous and older strata on the north side of the inlet. The most convincing kinematic indicator for movement on the Holberg fault is the presence of many northerly verging, gently plunging drag folds in the footwall. Minor coaxial thrust faults and a well-developed stylolitic cleavage in limestones in the footwall also demonstrate this sense of motion. Some of the major NW trending dextral strike-slip faults in the area are splays off the Holberg fault.

### Phase 3: Tertiary Deformation

The third deformational event in the area is characterized by northwesterly to north-northwesterly directed extension that postdates the deposition of the Upper Cretaceous Nanaimo Group sediments.

This phase of deformation is represented by minor north-easterly to east north-easterly striking normal faults that affect Upper Cretaceous and older strata. Northeast striking Tertiary dikes intruded during this final phase of deformation.

### 6.3 Mineralization and Alteration

No significant mineralization was observed on the Rupert Property. Owing to low topographic relief and thick glacial till very few outcrop exposures are present. Within the Rupert geophysical target itself, only two outcrops were found.

# 6.4 2005 Diamond Drilling

Drilling was conducted during a single phase in 2005. A total of 8 holes for 1108.7 m were drilled within a ~2 km² area (Table 4). All holes targeted the Rupert geophysical target selected by Jan Klein during an interpretation of the 2005 airborne survey data. Cross sections for the drill holes are shown in Figures 5a to 5f in the back pocket.

No significant mineralization was encountered in any of the holes drilled. A zone of weak hydrothermal alteration was encountered in R-027 consisting of hematite after magnetite and rare sulphide mineralization.

Drill Hole	Target	Collar (U	Collar (UTM NAD 83)			Inclination	Length (m)
		Easting	Northing	Elev (m)			
R-022	Rupert	615650	5604627	33	360	-90	182.9
R-023	Rupert	614867	5604683	31	360	-90	197.2
R-024	Rupert	615417	5605684	33	360	-90	110.0
R-025	Rupert	615417	5605684	33	360	-90	33.5
R-026	Rupert	614846	5605425	16	360	-90	38.7
R-027	Rupert	615796	5604997	35	360	-90	139.3
R-028	Rupert	616330	5605412	42	360	-90	66.4
R-029	Rupert	616389	5605399	47	360	-90	134.4
						TOTAL	1108.7

Table 4: 2005 Diamond Drilling Survey Data

### **Drill Hole R-022**

Drill hole R-022 tested the Rupert geophysical target area within a 2005 soil anomaly. This hole intersected andesitic volcanic rocks dominated locally by plagioclase-phyric, lapilli and ash tuffs. Weak pyrite mineralization (up to 1%) was encountered within a zone of strong silica and weak sericite alteration. The hole was shut down at 182.9m due to poor ground conditions.

0.0 to 54.8: CASING

- 54.8 TO 78.8: ANDESITE (JB1): Medium to light green strongly fractured and veined. Moderate epidote alteration, calcite stringers are common and cross-cut by pink to orange zeolite veins.
- 78.8 to 109.5: ANDESITE LAPILLI TUFF (JB2): Light green to grey with feldspar crystals and feldspar-phyric andesite lapilli 1 to 3 cm diameter. Pervasive epidote, silica and sericite alteration. Weakly mineralized with up to 1% pyrite.
- 109.5 to 122.4: ASH TUFF (JB2): Medium to light green, coarse ash tuff with sericite, carbonate and patchy epidote alteration. The basal contact is brecciated.
- 122.4 to 161.4: ANDESITE TUFF (JB2): Mottled red to green with heterolithic lapilli up to 8 cm in diameter. Weak epidote, silica, and hematite alteration but epidote, silica and hematite alteration may be strong locally. Trace occurrence of pyrite.

161.4 to 182.9: ANDESITE (JB1): Black to light green heterolithic volcanic fragmental. Moderate epidote alteration, calcite stringers are common. Volcanic fragmental overlies medium to light green andesite. Abundant calcite and zeolite stringers occur throughout.

EOH = 182.90

### **Drill Hole R-026**

Drill hole R-023 tested the Rupert geophysical target area. This hole intersected andesitic to dacitic volcanic rocks and ended in approximately 36 m of greywacke to well-bedded ash tuff (reworked?). These rocks have been moderately to strongly epidote-altered throughout. Silica, sericite and clay alteration is patchy and associated with epidote. The intensity of pervasive epidote encountered in this hole is typical of hanging wall alteration at Island Copper mine (J. Fleming, pers. comm.). Although no significant mineralization was encountered in this hole, this alteration akin to a style observed at Island Copper, is significant.

0.0 to 18.3: CASING

18.3 to 28.0: ANDESITE LAPILLI TUFF (JB2): Moderate to strong epidote alteration

28.0 to 44.1: ANDESITE (JB1): Moderate to strong epidote alteration, strongly magnetic.

44.1 to 56.3: ANDESITE LAPILLI TUFF (JB2): Mottled epidote alteration, well-bedded, non-magnetic

56.3 to 138.5: ANDESITE (JB1): Similar to interval 28.0 to 44.1, likely flows.

138.5 to 161.4: DACITE (JB4): Fragmental to fine ash, heterolithic lapilli, relatively fresh with little alteration

161.4 to 197.2: GREYWACKE (JB6): Medium grey to green, coarse, local conglomerate, heterolithic, non-magnetic, moderate carbonate alteration

EOH = 197.2

### Drill Holes R-024 and R-025

Drill hole R-024 tested the Rupert geophysical target area. The hole was abandoned at 27.4m without reaching bedrock when casing was lost down the hole.

Drill hole R-025 was a re-drill of lost hole R-024. At 38.7m this hole was also abandoned when the rods became sanded in after encountering a high pressure aquifer.

### **Drill Hole R-026**

Drill hole R-026 tested the Rupert geophysical target area along the flank of an east-west trending magnetic high within BHP's "Dyke Trend". Nearby holes R-014 and R-015 – drilled in 1984 by BHP – returned 30 feet of 0.12% Cu, 0.048% Mo and 10 feet of 0.10% Cu, 0.008% Mo, respectively and revealed minor intrusive rocks similar to the Rupert Stock. Variably sericite, pyrite, silica, and carbonate altered andesite were encountered throughout hole R-026 but the highest geochemical result was 740 ppm Cu.

0.0 to 6.1: CASING

6.1 TO 151.5: ANDESITE (JB1): Variably sericite-pyrite altered massive to fragmental volcanic rock. Several weak to moderately magnetic zones occur. Lapilli and discrete feldspar crystals are visible along less abundant thin horizons.

EOH = 151.50

### **Drill Hole R-027**

Drill hole R-027 was drilled to test the Rupert geophysical target area in an area of high resistivity. Lithologies encountered in this hole include andesite and several fault gouge zones. Moderate sericite and chlorite alteration is widespread and associated with up to 3% pyrite locally. Hematite replacement of magnetite is locally common. The weakened areas of hydrothermal alteration likely became the focus for later faulting. The hole was abandoned at a depth of 139.3 due to poor ground conditions and a total of 48.8 metres of NW casing was lost in the hole.

0.0 to 64.0: CASING

- 64.0 to 71.8: ANDESITE LAPILLI TUFF (JB2): Medium to light green, fine-grained, with common calcite veins.

  Moderate chlorite and sericite alteration with weak epidote and carbonate alteration, minor pyrite
- 71.8 to 72.2: FAULT GOUGE: Clay rich zone with pyrite stringers near the hanging wall. Up to 3 % pyrite.
- 72.2 to 76.6: ANDESITE (JB1): Pale to dark green, strong sericite alteration, locally occurring magnetite and hematite alteration.
- 76.6 to 77.3: FAULT GOUGE: Minor quartz and carbonate with up to 3 % sericite and 2 % ankerite (?). Moderately broken.
- 77.3 to 139.3: ANDESITE LAPILLI TUFF (JB2): Medium green, fine-grained, common calcite and zeolite veins, moderate chlorite alteration and weak epidote and carbonate alteration. Minor pyrite and localized sericite alteration.

EOH = 139.30

### **Drill Hole R-028**

Drill hole R-028 was drilled to test the Rupert geophysical target area within an area characterized by low resistivity and low magnetics. The hole provided only 6.5m of core before ground conditions prevented further recovery and the hole was lost. Andesite was the only lithology encountered in this hole, however this unit exhibited strong silica and weak sericite alteration which fails to explain the resistivity low.

0.0 to 59.9: CASING

59.9 to 66.4: ANDESITE VOLCANIC ROCK (JB1): Light to medium greyish green, strong silica and weak sericite alterations, up to 2% pyrite.

EOH = 66.40, casing twisted off, hole lost.

### **Drill Hole R-029**

Drill hole R-029 was drilled to replace hole R-028 which was lost due to poor ground conditions. This hole intersected dark green andesitic volcanic rocks cut by several fault zones. Alteration is highly variable including sericite, clay, silica and magnetite. A zone at the top of the hole contains 5% pyrite throughout.

0.0 to 54.9: CASING

- 54.9 to 90.7: ANDESITE LAPILLI TUFF (JB2): Dark grey to black with minor sericitised zones that appear lighter, moderate silica and strong magnetite alteration. Up to 5% pyrite throughout the core. Strong to moderately magnetic.
- 90.7 to 105.5: ANDESITE (JB1): Dark green to black, variable stringer mineralization with quartz and magnetite in dark intervals
- 105.5 to 110.0: FAULT BRECCIA: Light green, strongly pyritic zone of strongly fractured andesite. Fault slip is parallel to core access. Strong clay alteration.
- 110.0 to 134.4: ANDESITE (JB1): Medium green, moderate hematite, silica and sericite alteration, possible biotite alteration, 3% pyrite.

EOH = 134.40

### 7.0 GEOCHEMISTRY

## 7.1 Soil Geochemistry

During the 2005 program, 146 soil samples were collected from the Rupert property across a geophysical target area selected from the 2005 airborne survey data (see next section). Samples were collected every 50 m from a grid comprising north-south lines about 250 m apart. Previous drilling in the area has shown overburden to typically be about 30 to 50 m thick and to locally exceed 200 m. Thus, an alternative, non-conventional analysis was used. The soils were analysed for 63 elements via ICPMS following digestion in a hot (60°C) hydroxylamine hydrochloride leach. This selective leach method aims to overcome the problems of thick transported overburden by dissolving amorphous hydrous iron oxide which can be an effective scavenger of mobile metal ions. Additionally, the same samples were analysed for 50 elements via an aqua regia acid digestion and a combination of ICPMS and ICPAES as a comparison with the selective leach method. Twelve samples were also collected from within the known Hushamu deposit as an orientation study for comparison with the Rupert selective leach samples. Overburden depths near the sample sites at Hushamu range from 4 to 29 m.

Figures 6a through 6d show standard soil geochemical results (non-selective leach) for the 2005 samples for copper and molybdenum. Also plotted are 1438 soils from previous soil programs (Fleming, 1985a, 1986a, 1987, 1988). Gold geochemical values are not presented - the 2005 data for gold are all below detection limit for the selective leach method and gold was seldom reported in the historic reports owing to a conclusion that gold results were unreliable due to affects of elevated manganese (Fleming, 1985a). Tables 5 and 6 present calculated percentiles and a correlation matrix for this dataset. Copper shows a fairly strong correlation with molybdenum and a correlation with zinc. Zinc also shows correlation with gold, arsenic and molybdenum.

Percentile Au Ag As Cu Мо Pb Zn (ppb) (ppm) (ppm) (ppm) (ppm) (ppm) (ppm) 171 936 1341 1427 1307 1413 1427 Population Max Value 75 99.9 230 910 57 1695 278 35 2.2 36 147 16 207 98th 278 95th 20 1.1 13 100 10 17 111 10 0.5 6 82 11 79 90th 8 80th 5 0.3 3 67 6 5 59

**Table 5: Historic Soil Geochemistry Percentiles** 

Table 6: Historic Soil Geochemistry Correlation Matrix

1

1

50th

0.1

47

4

1

38

	Au	Ag	As	Cu	Мо	Pb	Zn
Au							
Ag	0.04						
As	0.10	0.05					
Cu	0.00	0.01	0.06				
Мо	0.00	0.08	0.35	0.35			
Pb	0.00	0.02	0.21	0.00	0.00		
Zn	0.40	0.04	0.53	0.14	0.47	0.23	

Interpreted copper results for the 2005 selective leach samples are shown in Figure 7. This diagram was prepared by Barry Smee using regression techniques which account for sample variables

(e.g. soil horizon type). The result is a residual Cu ratio which is a comparison of relative copper concentrations. The resulting anomalies are weak but are continuous and clear (Smee, written comm.). Percentiles for the 2005 selective leach data (excluding those collected from across the Hushamu deposit) are shown in Table 7. These data typically show very low magnitude upper percentile values.

Table 7: 2005 Rupert Area Selective Leach Soil Geochemistry Percentiles

Percentile	Au	Ag	As	Cu	Мо	Pb	Zn
	(ppm)						
Population	131	131	131	131	131	131	131
Max Value	-0.05	0.18	3.4	31	0.18	44.8	28
98th	-0.05	0.12	0.7	24	0.04	13.6	21
95th	-0.05	0.09	0.5	18	0.03	5.6	18
90th	-0.05	0.08	0.4	15	0.02	4.2	16
80th	-0.05	0.07	0.2	12	0.02	2.7	11
50th	-0.05	0.04	0.1	8	0.01	1.6	7

By comparison, the samples collected across the Hushamu deposit (Table 8) typically show higher values of copper and molybdenum consistent with sampling above a mineralized porphyry system. Figure 8 compares the Hushamu selective leach and standard soil analysis data and provides an estimate of the overburden depth at each soil sample location. It is evident from these charts that both methods show similar trends and therefore are both detecting the buried mineralization. Where overburden depths are excessively thick (>20 m), however, both methods fail to return elevated values as shown by samples HMM2-1 and HMM2-2. Samples HMM2-5 and HMM2-6 show low geochemical values for copper and molybdenum despite shallow overburden. Drilling in the immediate area of these samples indicates that mineralization is present in the underlying bedrock. These samples were collected from organic material overlying talus on the flank of Mt. McIntosh, so perhaps barren material transported down this slope masked the underlying geochemical signature.

Table 8: 2005 Selective Leach Soil Geochemistry from Hushamu deposit

Sample	Overburden	Au	Ag	As	Cu	Мо	Pb	Zn
	Depth (m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
HMM1-1	5	<0.05	0.074	0.4	42	0.57	14.6	7.1
HMM1-2	5	< 0.05	0.135	0.3	45.8	0.61	17.8	8.3
HMM1-3	4	< 0.05	0.282	0.2	71.3	2.29	14.7	10.1
HMM1-4	10	< 0.05	0.209	0.1	79.8	1.17	39.2	7
HMM1-5	12	< 0.05	0.393	0.4	65.2	1.74	33.9	2.6
HMM1-6	16	< 0.05	0.338	0.4	62.2	0.66	13.6	2.7
HMM2-1	29	< 0.05	0.067	0.1	3.7	0.02	4.1	3.7
HMM2-2	23	< 0.05	0.206	0.1	1.9	0.02	5.8	7.2
HMM2-3	19	< 0.05	0.374	1.2	32.3	0.18	6.9	10.8
HMM2-4	14	< 0.05	0.097	0.1	10.4	0.14	3.5	4.2
HMM2-5	9	< 0.05	0.195	0.1	0.79	0.02	4.8	7.5
HMM2-6	4	< 0.05	0.118	<0.1	0.62	0.01	4.3	8

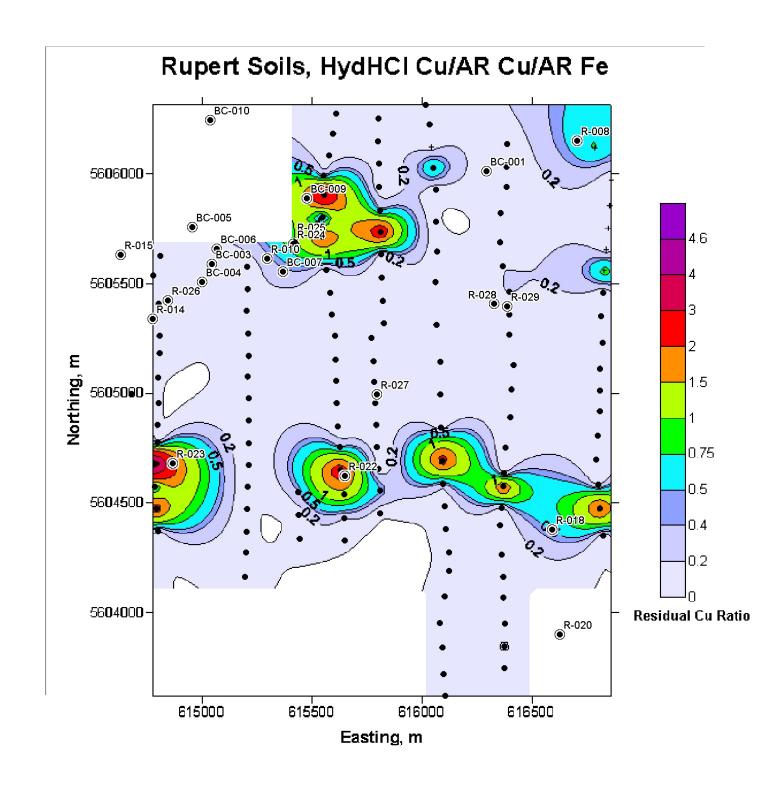


Figure 7: Contour plot of the 2005 Rupert Soil Grid. A residual Cu ratio prepared using regression techniques to account for sample variables (e.g. soil horizon type) was used to prepare the plot. Drill hole and sample locations are shown. Produced by Barry Smee.

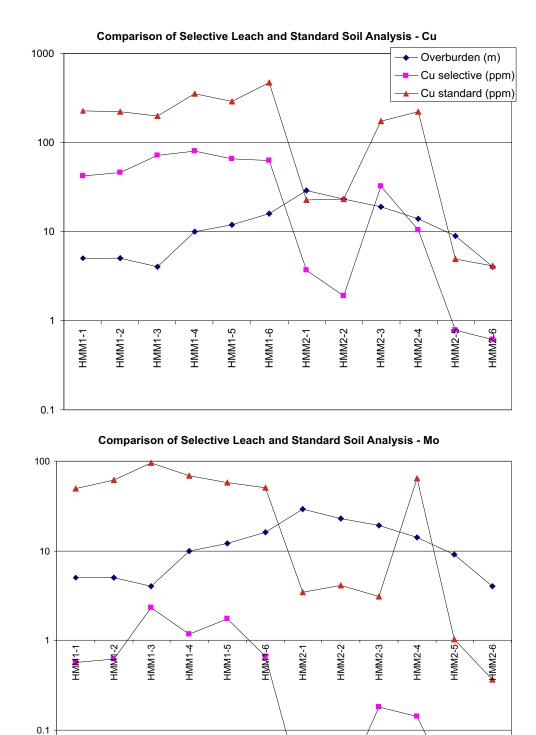


Figure 8: Soil sample data for selective leach analyses (squares) compared with standard analyses (triangles) for the samples collected across the Hushamu deposit. Overburden depth as estimated from drill data is shown (diamonds). Scale is logarithmic.

Overburden (m)

Mo selective (ppm)

Mo standard (ppm)

0.01

Comparison of the soil analyses from the Hushamu deposit area suggest that both the hot hydroxylamine hydrochloride leach (selective leach) and the standard aqua regia acid digestion techniques would detect a porphyry system provided that overburden is less than about 20 m thick. If overburden is thicker, it appears that the geochemical signature is completely masked. Likewise, transported barren talus effectively masks geochemical signatures even where overburden is shallow.

### 8.0 Airborne Geophysics

During the period May 4 to May 11, 2005 a DIGHEM<sup>V-DSP</sup> electromagnetic / resistivity / magnetic survey was flown by Fugro Airborne Surveys Corp. over the Rupert and adjacent Hushamu properties. Survey coverage consisted of approximately 2687 line-km, including tie lines and approximately 25% of this grid covered the Rupert property. Line separation was 200 m and lines were flown north-south. A 203 page report was prepared by Fugro and was subsequently reviewed by consulting geophysicist Jan Klein. For further specifics on the methods, materials used, detailed results, and conclusions the reader is referred to Smith (2005) and Klein (2005b). What follows is a synopsis from these sources.

Interference from seawater and power lines affected calculated resistivity for up to 400 m from power lines and a significant distance from seawater inlets. No EM signatures were obtainable over the Island Copper Pit due to salt water currently residing in the pit. EM and magnetic signatures over areas of known mineralization were highly variable. Due to this variability no single anomalous signature could be used as an indicator for similar, undiscovered mineralization.

Within the Rupert property area, a single target was selected by Klein located to the east of the Island Copper Mine. This area comprises large resistivity lows combined with a magnetic pattern suggesting structural offsets (Figure 6e and f).

### 9.0 DISCUSSION AND CONCLUSIONS

The 2005 Rupert exploration focused on discovering a porphyry system east of the Island Copper deposit. Given that several showings and deposits occur within the belt westward from Island Copper, it is reasonable that similar systems are also present to the east within the same belt or rocks. This area, however, is difficult to explore: topography is subdued and overburden is typically quite thick. This precludes using basic techniques such as mapping or standard soil analyses to obtain reliable data sets.

As a first stage in 2005, the Rupert area was surveyed with a helicopter-borne electromagnetic / resistivity / magnetic geophysical system. Results in the Rupert area were examined by geophysicist Jan Klein who highlighted a three by three kilometre target. Broad resistivity lows with flanking magnetic highs showing structural offsets indicated a potential for buried porphyry systems. Reconnaissance prospecting and mapping in the area showed almost nil outcrop exposure. A logging road system criss-crosses the target area allowing easy access to the area for drill-testing.

Prior to drilling, soil samples were collected from a grid across the main target area. Samples were analysed by a selective leach technique designed to "see" through cover. The results of this survey did produce two multi-line anomalies which served as good starting points within an otherwise blind target. Drilling of these anomalies, however, failed to intersect mineralization casting doubt on the soil technique. To test the technique, an orientation survey was conducted across the Hushamu deposit located west of Island Copper. At Hushamu, a 220 Mt deposit is known to outcrop below locally thick transported overburden. Both the selective leach and standard soil analyses detected mineralization buried by less than ~20m of overburden. Where overburden is thicker, sample results were low. Drilling within the Rupert 2005 anomalies has shown overburden to be from 18 to 55 metres thick so it is likely that the soil analyses and anomalies do not reflect underlying bedrock sources.

Despite a lack of mineralization within the 2005 drill holes, several holes did indicate the presence of a large alteration system. Hole R-023 intersected moderately to strongly epidote-altered andesite over about 40 metres, locally with possible secondary magnetite. Hole R-026 which was drilled

near the 1984 BHP holes that intersected anomalous copper and molybdenum, did not return significant mineralization but did intersect variably sericite-silica altered and pyritic andesite. Holes R-028 and R-029, drilled within an area characterized by low resistivity, intersected moderate to strongly sericite-pyrite-altered andesite volcanic rocks. The east-west-trending dyke system intersected by BHP was not intersected in the 2005 drilling. Given that this system is thought to be steeply-dipping, this is not surprising given that all the 2005 holes were oriented vertically.

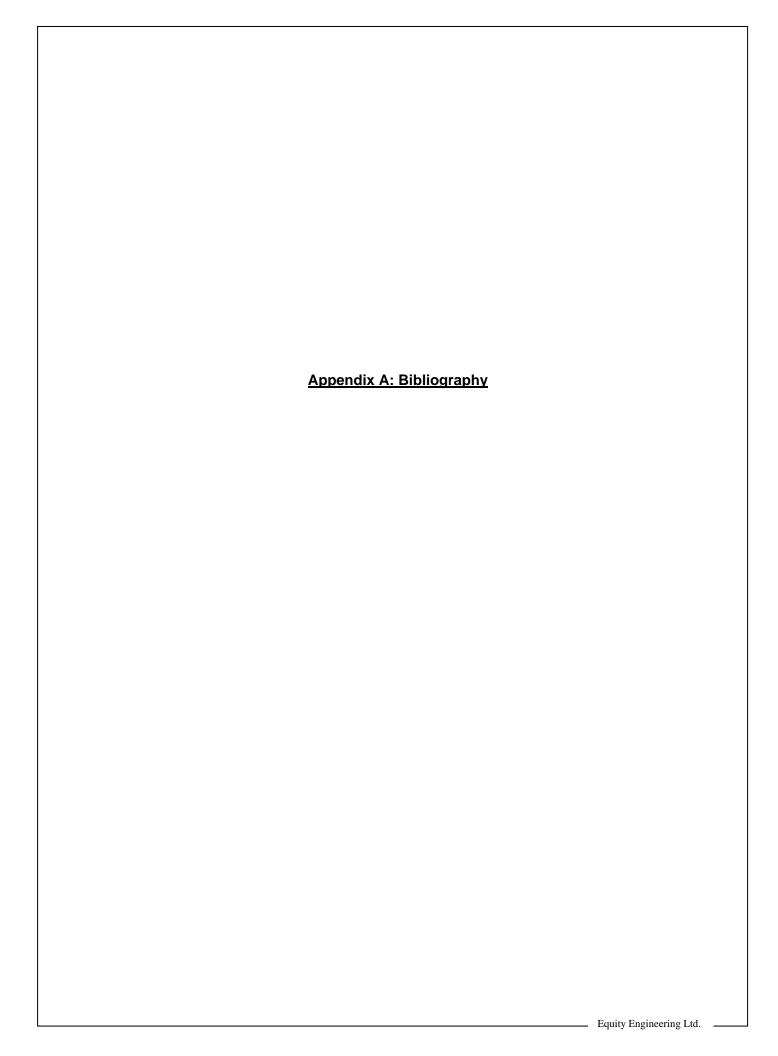
Soil sampling across the area – even using selective leach techniques – seems to be inappropriate given the thick overburden across the area. Further drilling from existing roads is not recommended as most road-accessible areas of interest have been drilled. All 2005 and earlier drilling was seemingly drilled on existing roads out of convenience. Further testing of the BHP "Dyke Trend" would be warranted if drill sites were not confined to existing roads.

Respectfully submitted,

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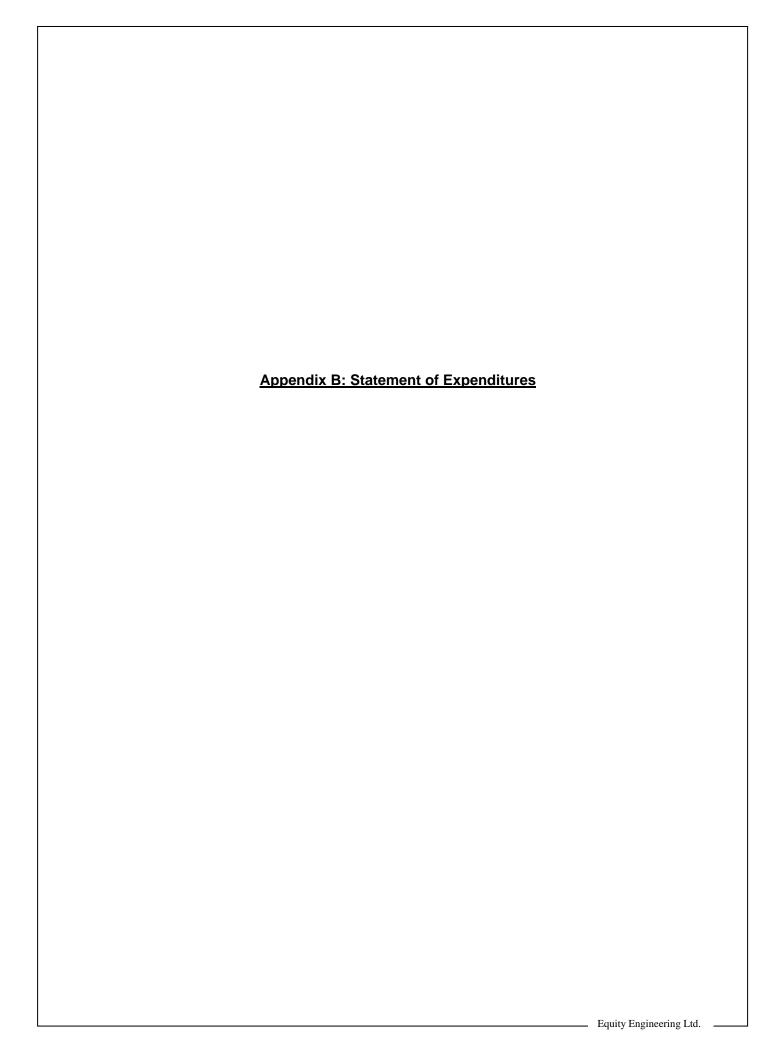


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# Statement of Expenditures Rupert Block February 1, 2005 - December 18, 2005

# **Data Compilation and Airborne Geophysics**

(Prorated by area covered: 20% Rupert / 80% Hushamu)

PROFESSIONAL FEES AND WAGES:				
Scott Heffernan, Project Geologist 2.60 days @ \$520/day	\$	1,353.04		
Henry Awmack, P.Eng.	Ψ	1,555.04		
2.05 days @ \$520/day		1,066.00		
Stewart Harris, P.Geo.		0.04		
0.01 days @ \$520/day Dave Pawliuk, P.Geo.		6.24		
2.08 days @ \$520/day		1,079.52		
Mike Henrichsen, Geologist		.,		
7.53 days @ \$420/day		3,160.92		
Scott Parker, Drafting/Logistics		4 0 40 00		
20.80 hours @ \$50/hour Clerical		1,040.00		
72.15 hours @ \$25/hour		1,803.75	\$	9,509.47
		<u> </u>		,
EXPENSES:	•	4-4-00		
Plot Charges	\$	154.80		
Printing and Reproductions		55.40		
Maps and Publications		4,290.19		
Meals		31.30		
Accommodation		92.95 1.80		
Parking		320.82		
Truck Rental (non-Equity) Automotive Fuel		61.90		
		12.24		
Automotive Expenses Ferries		18.00		
Airfare		170.00		
Telephone Distance Charges		5.00		
Courier		26.14		
Airborne Geophysics		48,830.40		
Geophysical Consulting		1,294.77		55,365.70
SUB-TOTAL (Compilation and Airborne Geo	physic	s):	\$	64,875.17
	, <b>,</b>	-,-	Ψ	0 1,01 01 11
	_	nd Fieldwork		
(Based PROFESSIONAL FEES AND WAGES:	on actu	ual costs)		
Jim Lehtinen, P.Geo.				
48.50 days @ \$520/day	\$	25,220.00		
Arthur Nelson, Sampler	Ψ	20,220.00		
17.00 days @ \$250/day		4,250.00	\$	29,470.00

# Rupert

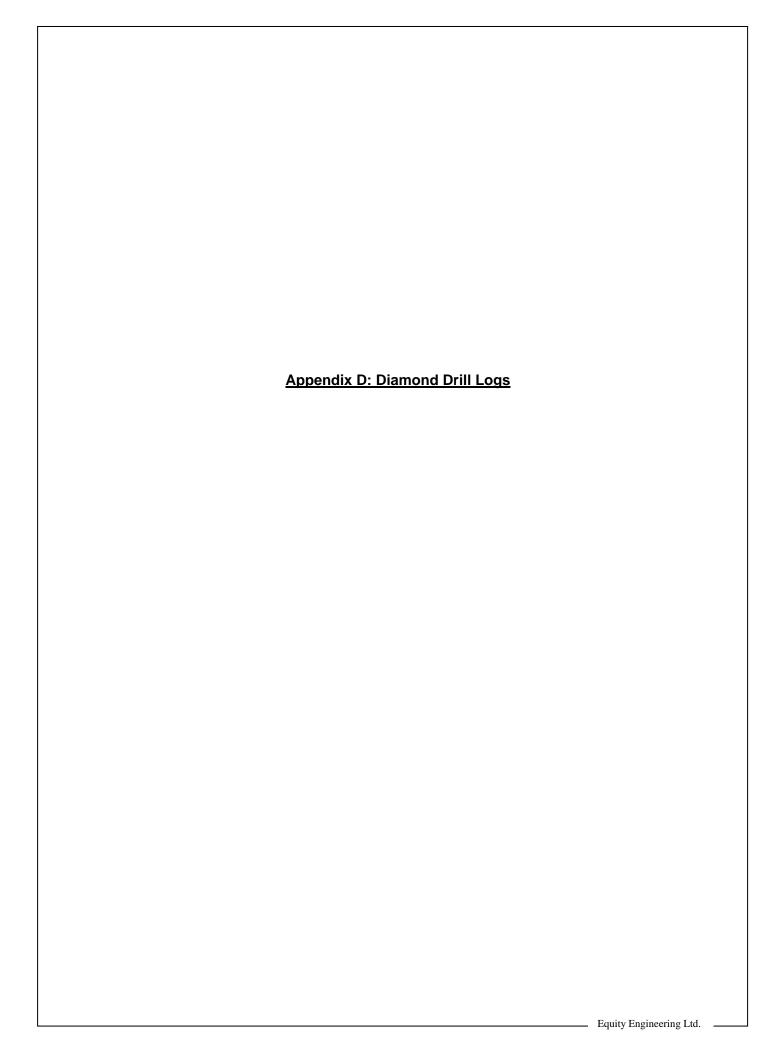
# Statement of Expenditures Rupert Block February 1, 2005 - December 18, 2005

# **EQUIPMENT RENTALS**

**TOTAL:** 

Field Computers		
48 days @ \$25/day		1,200.00
,		,
EXPENSES:		
Chemical Analyses (estimated)	\$ 35,000.00	
Meals	517.85	
Accommodation	16,240.00	
Core Saw Rental (non-Equity)	620.60	
Cat	16,700.00	
Drilling: Mob/Demob	12,000.00	
Drilling: Footage	128,242.00	
Drilling: Materials	23,417.16	
Drilling: Standby/Moves/Travel	6,815.00	
Expediting	459.00	
Report (estimated)	5,000.00	245,011.61
SUB-TOTAL (Drilling and Fieldwork):		\$ 275,681.61
, ,		
PROJECT SUPERVISION CHARGES:		
12% on portion <\$100,000: (\$20,000.00)	\$ 2,400.00	
10% on portion <\$500,000: (\$80,000.00)	8,000.00	
8% on balance: (\$240,556.78)	19,244.54	29,644.54
SUB-TOTAL:		\$ 370,201.32
GST: 7% on sub-total		25,914.09

\$ 396,115.41





# **DRILL LOG**

Project:	Collar Elevation (m):
Rupert	33.0
Hole	Azimuth (°):
R 022	360
Location: 5604627 m North	Dip (°):
615650 m East	-90.0
Logged by:	Length (m):
J. Lehtinen	182.90
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by:	Vertical Projection:
ALS Chemex-Vancouver	
Core Size:	
NQ	
Date Started: Date Completed:	
2005/11/11 2005/11/15	
Dip Tests By:	
none	
Objective	
Test Rupert area near soil anomaly.	

# **Summary Log:**

0.0 to 54.8: CASING

54.8 TO 78.8: ANDESITE (JB1): medium to light green. mEP alteration, calcite stringers common

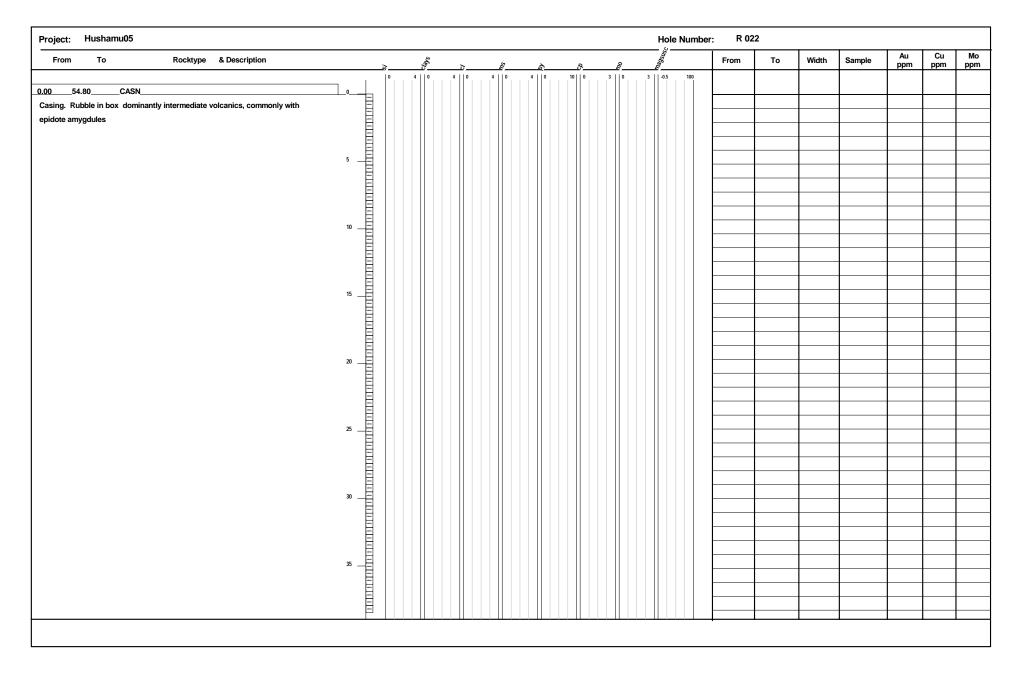
78.8 to 109.5: ANDESITE LAPILLI TUFF (JB2): pervasively epidote, silica and sericite altered, 1% PY

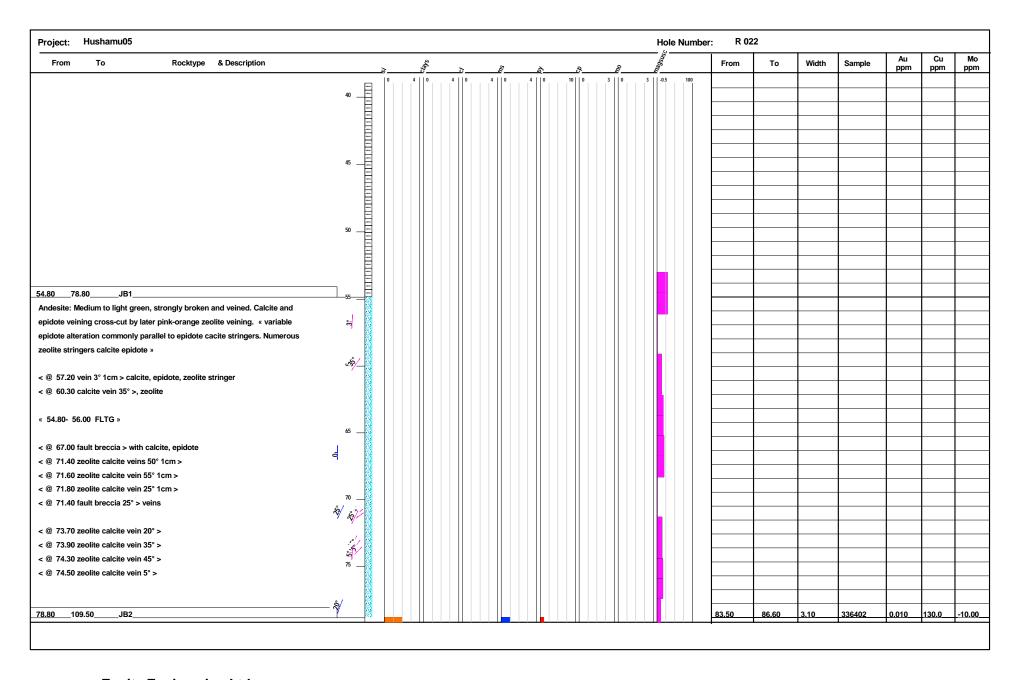
109.5 to 122.4: ASH TUFF (JB2): medium to light green, patchy EP, CA alteration

122.4 to 161.4: ANDESITE TUFF (JB2): red-green, wEP, wSI, wHE but locally strong EP, SI, HE alteration

161.4 to 182.9: ANDESITE (JB1): medium to light green. mEP alteration, calcite stringers common

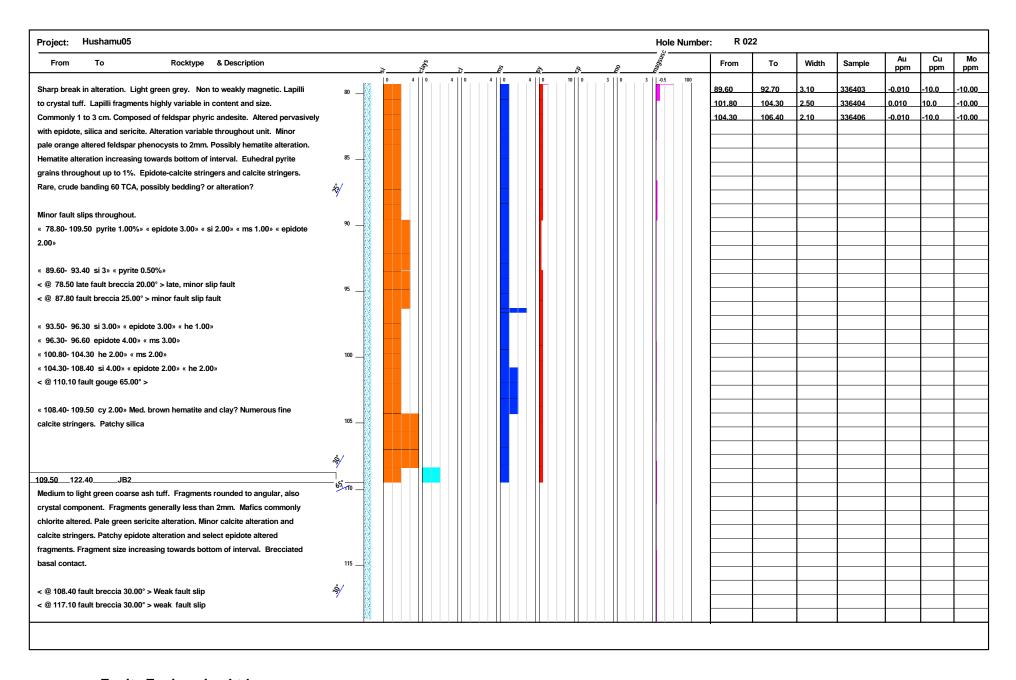
EOH = 182.90





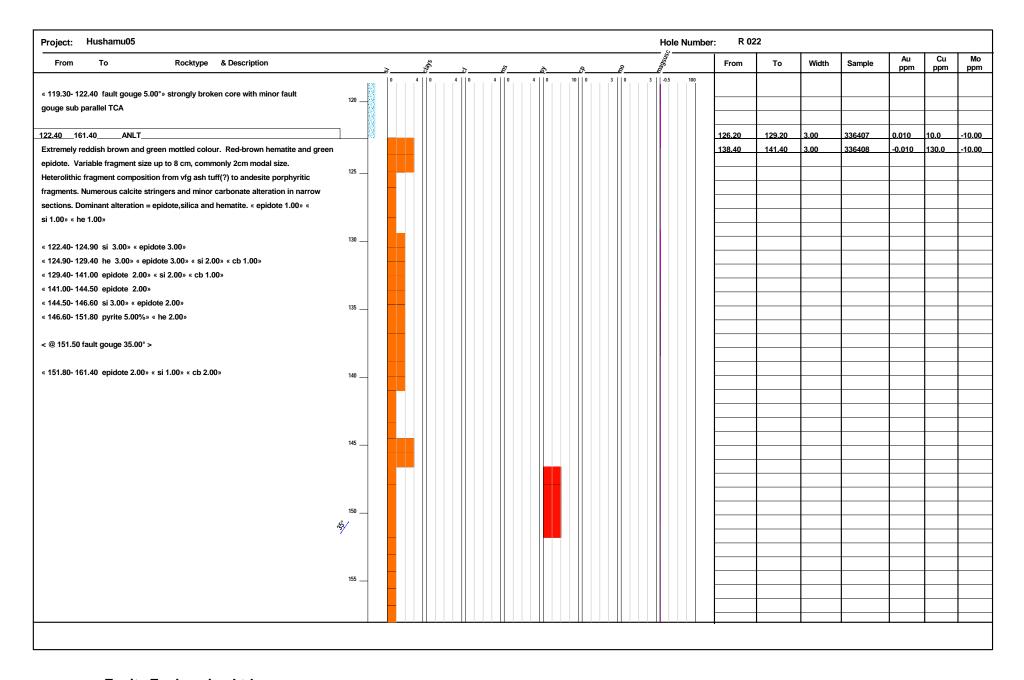
2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 2 of 5



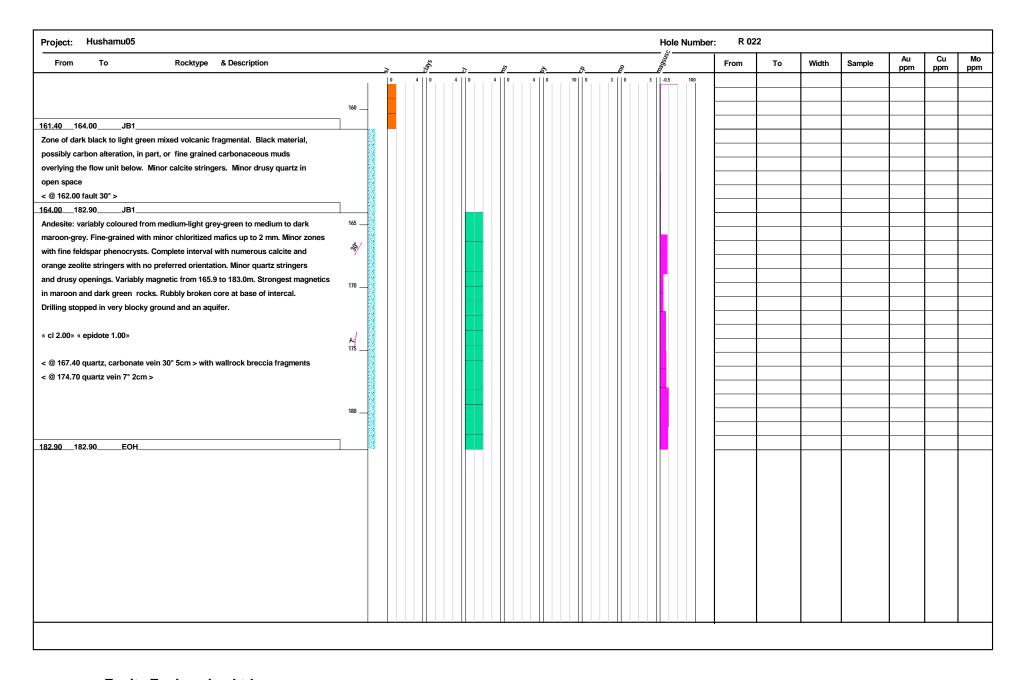
2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 3 of 5



2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 4 of 5



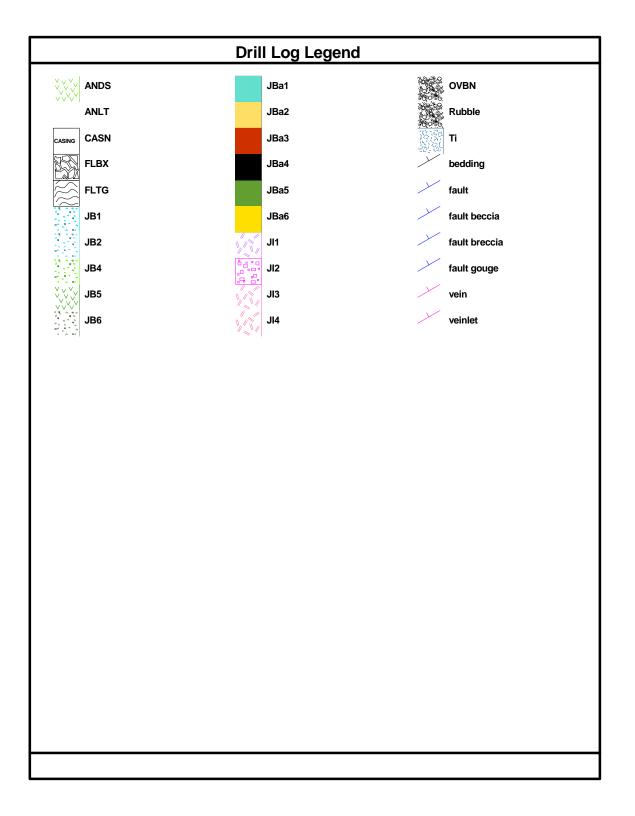
Equity Engineering Ltd.

\* depth component not to scale

\* AVG indicates averaged duplicate samples

\* AVG indicates averaged duplicate samples

2006/04/13





Project:	Collar Elevation (m):
Rupert	31.0
Hole	Azimuth (°):
R 023	360
Location: 5604683 m North	Dip (°):
614867 m East	-90.0
Logged by:	Length (m):
J. Lehtinen	197.20
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by:	Vertical Projection:
ALS Chemex-Vancouver	
Core Size:	
NQ	
Date Started: Date Completed:	
2005/11/15 2005/11/18	
Dip Tests By:	
none	
Objective	

### **Summary Log:**

0.0 to 18.3: CASING

18.3 to 28.0: ANDESITE LAPILLI TUFF (JB2): moderate to strong epidote

28.0 to 44.1: ANDESITE (JB1): moderate to strong epidote, strongly magnetic

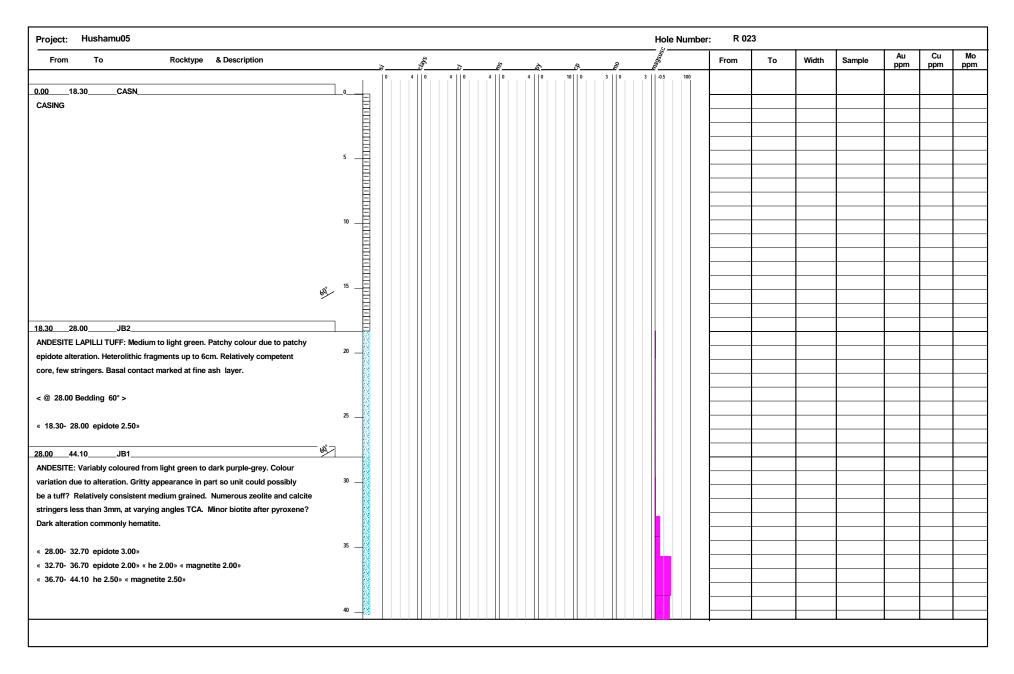
44.1 to 56.3: ANDESITE LAPILLI TUFF (JB2): mottled epidote alteration, well-bedded, non-magnetic

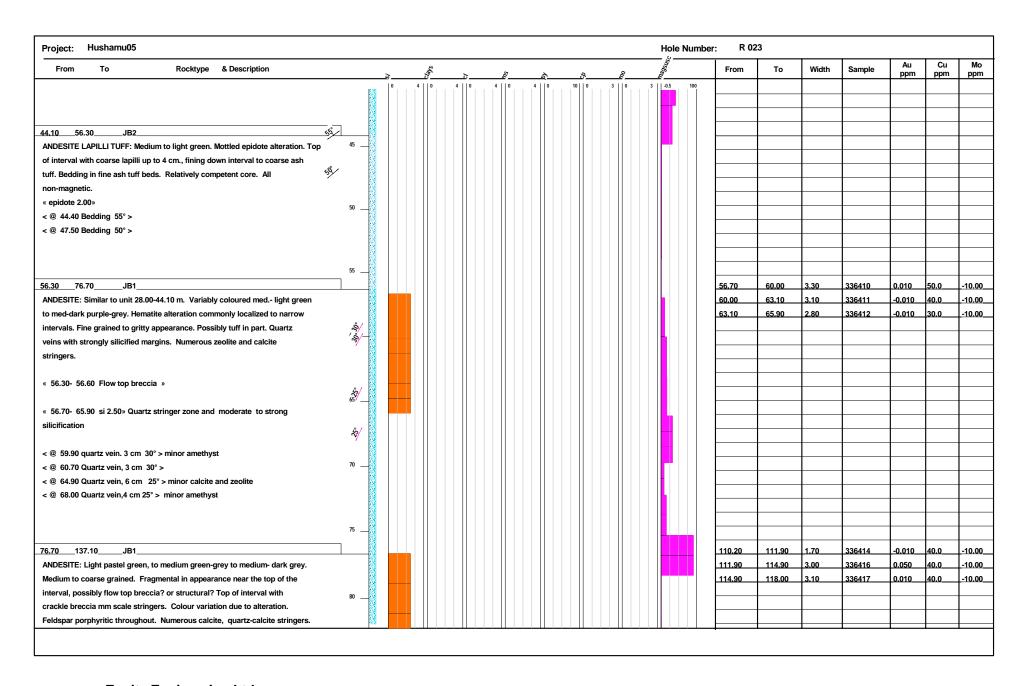
56.3 to 138.5: ANDESITE (JB1): similar to 28.0 to 44.1, likely flows

138.5 to 161.4: DACITE (JB4): fragmental to fine ash, heterolithic, fresh

161.4 to 197.2: GREYWACKE (JB6): medium grey-green, coarse, local conglomerate, heterolithic, non-magnetic, mCA

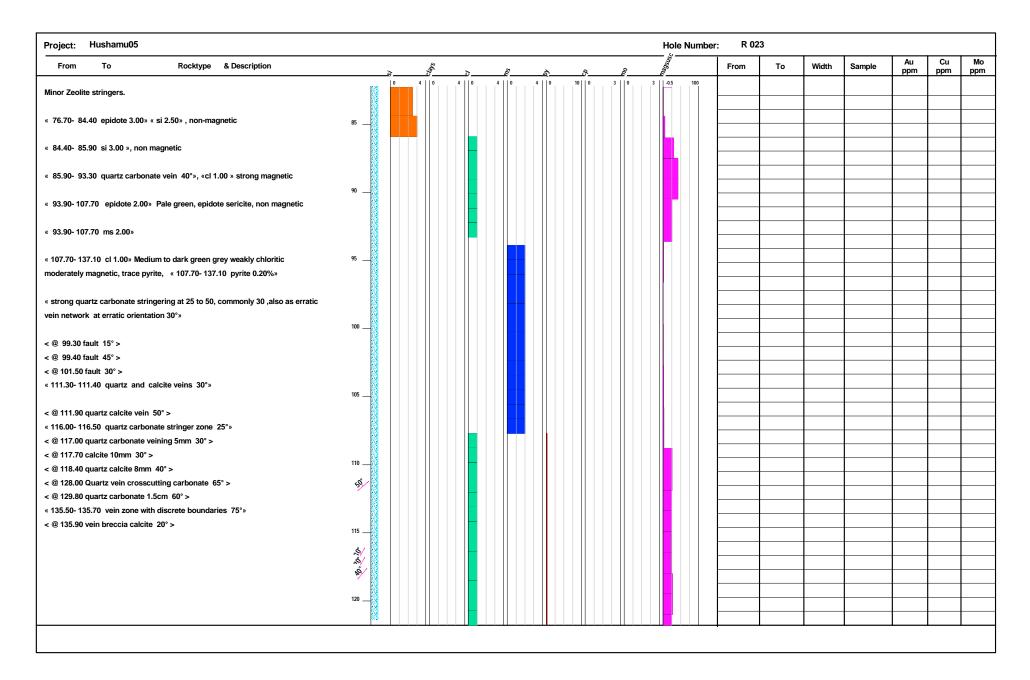
EOH = 197.2





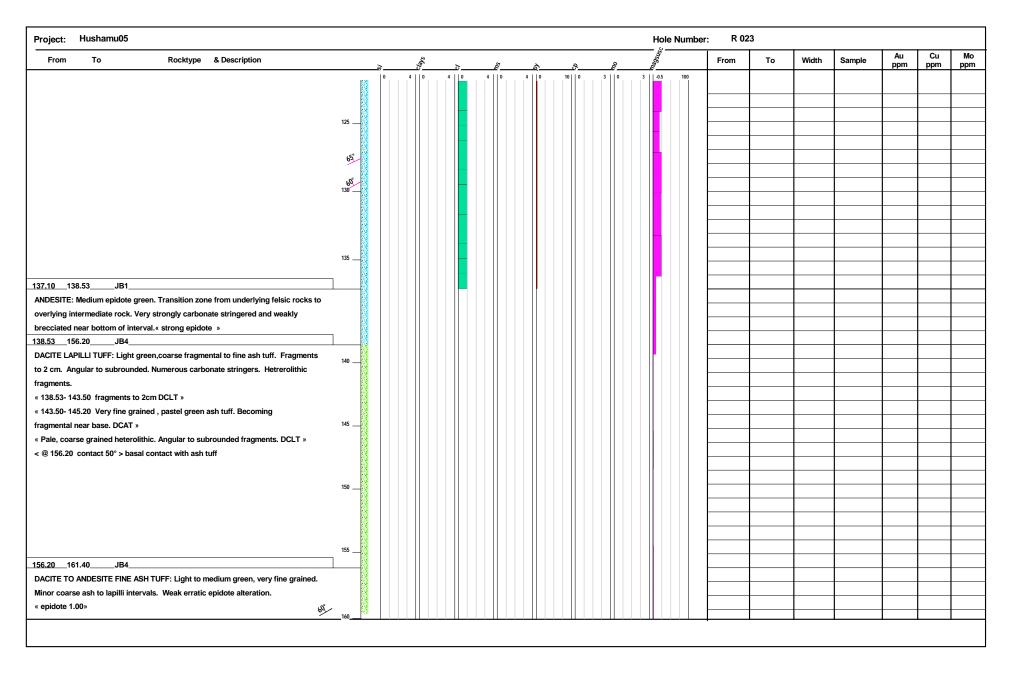
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\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 2 of 5

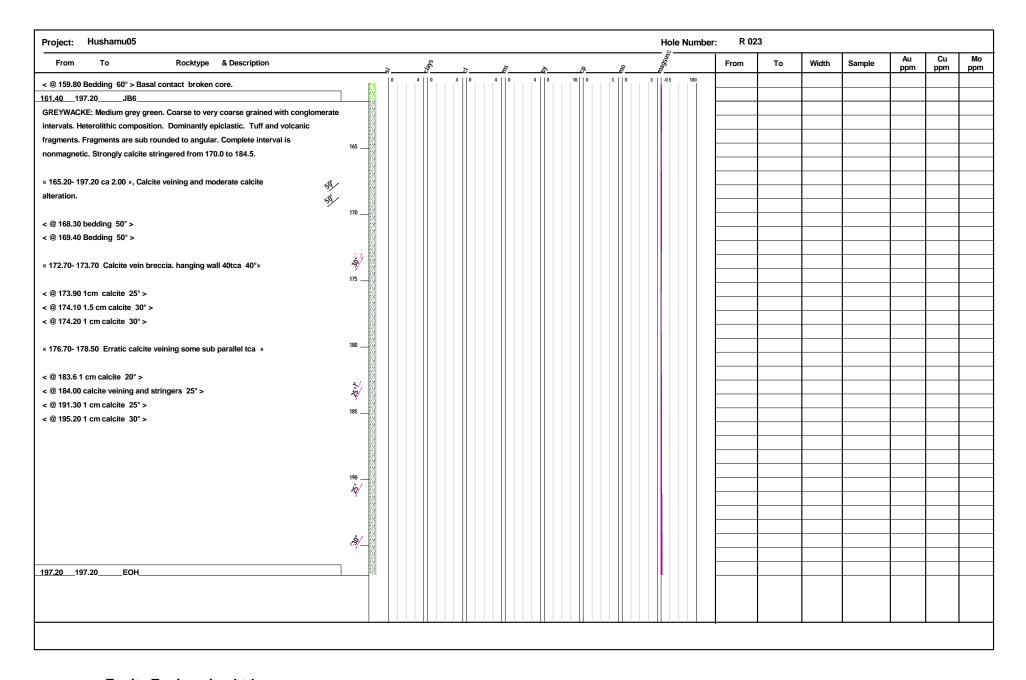


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\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 3 of 5



\* depth component not to scale



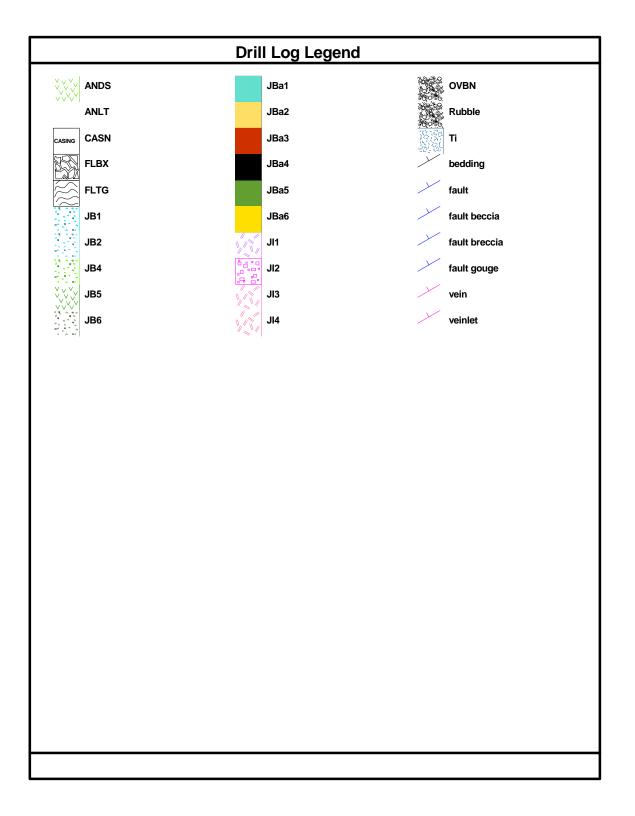
Equity Engineering Ltd.

\* depth component not to scale

\* depth component not to scale

\* AVG indicates averaged duplicate samples

2006/04/13





Project:	Collar Elevation (m):
Rupert	33.0
Hole	Azimuth (°):
R 024	360
Location: 5605684 m North	Dip (°):
615417 m East	-90.0
Logged by:	Length (m):
J. Lehtinen	33.50
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by:	Vertical Projection:
ALS Chemex-Vancouver	
Core Size:	
NQ	
Date Started: Date Completed:	
2005/11/18 2005/11/19	
Dip Tests By:	
none	
Objective	

# **Summary Log:**

0.0 to 27.4: CASING

EOH = 27.4, casing lost in hole, abondoned.



Project:	Collar Elevation (m):
Rupert	33.0
Hole	Azimuth (°):
R 025	360
Location: 5605684 m North	<b>Dip (°):</b> -90.0
615417 m East	
Logged by:	Length (m):
J. Lehtinen	38.70
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by:	Vertical Projection:
ALS Chemex-Vancouver	
Core Size:	
NQ	
Date Started: Date Completed:	
2005/11/19 2005/11/20	
Dip Tests By:	
none	
Objective	

# **Summary Log:**

0.0 to 38.7: CASING

EOH = 38.7, hole abondoned at bedrock interface due to high pressure aquifer, rods twisted off.



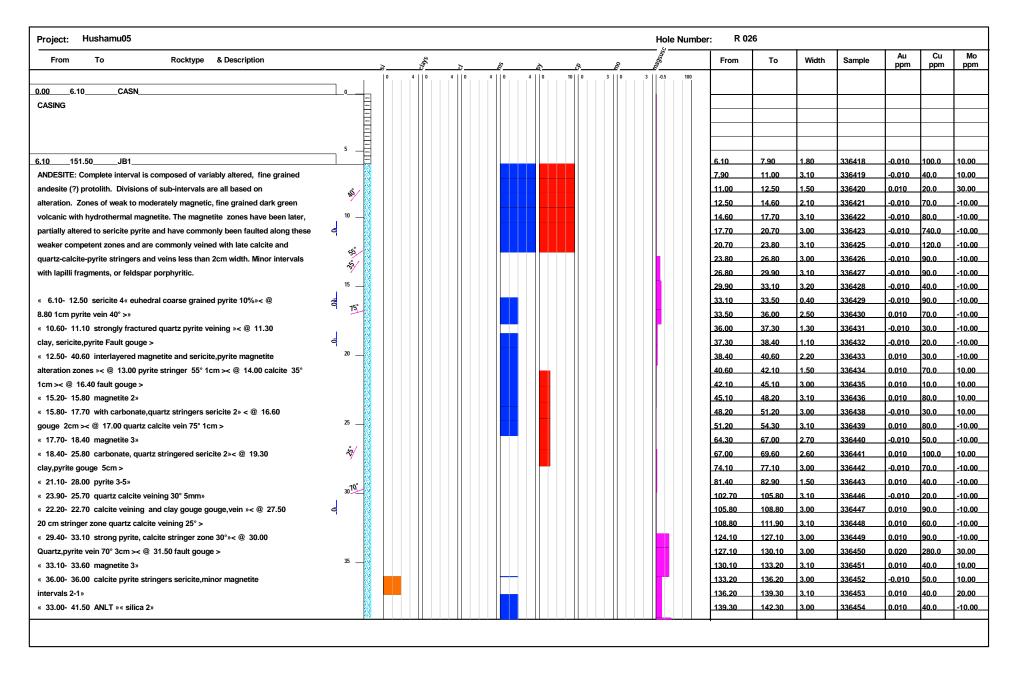
Project:	Collar Elevation (m):
Rupert	16.0
Hole	Azimuth (°):
R 026	360
Location:         5605425         m North           614846         m East	<b>Dip (°):</b> -90.0
Logged by:	Length (m):
J.Lehtinen	151.50
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by: ALS Chemex-Vancouver	Vertical Projection:
Core Size:	
NQ	
Date Started:         Date Completed:           2005/11/20         2005/11/23	
Dip Tests By:	
Objective	

# Summary Log:

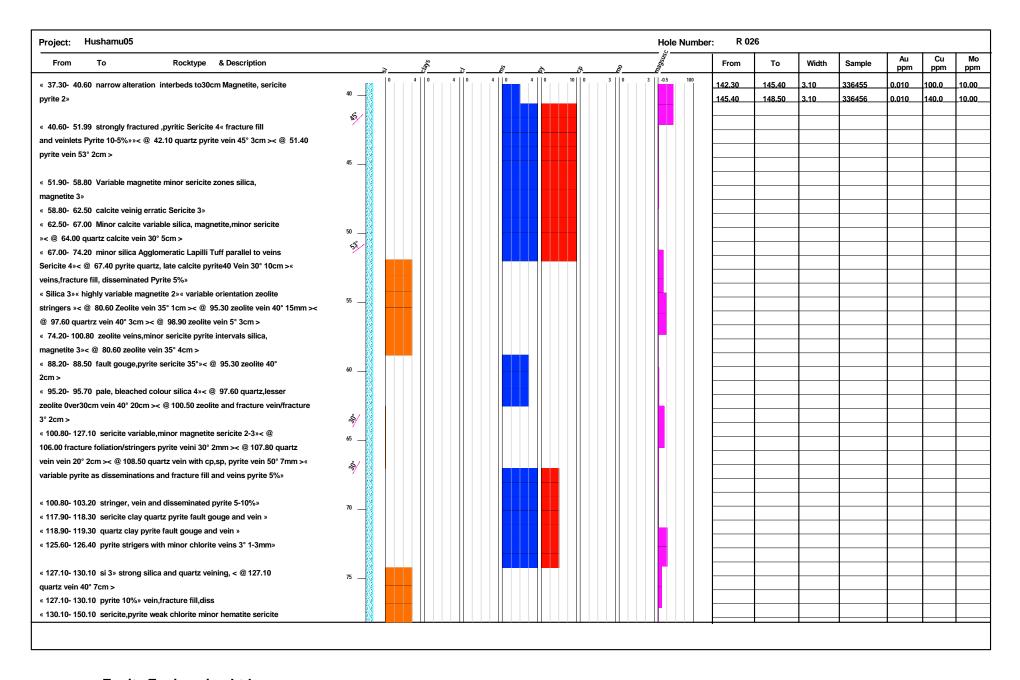
0.0 to 6.1: CASING

6.1 TO 151.5: ANDESITE (JB1): variably sericite-pyrite altered massive to fragmental volcanic rock

EOH = 151.50

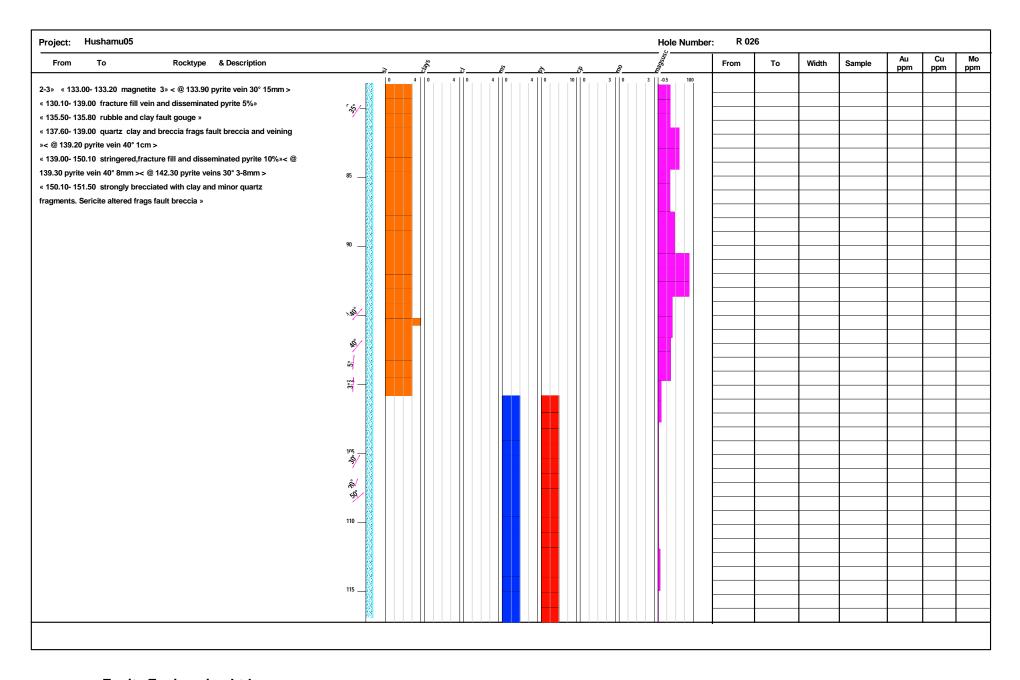


\* depth component not to scale



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\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 2 of 4



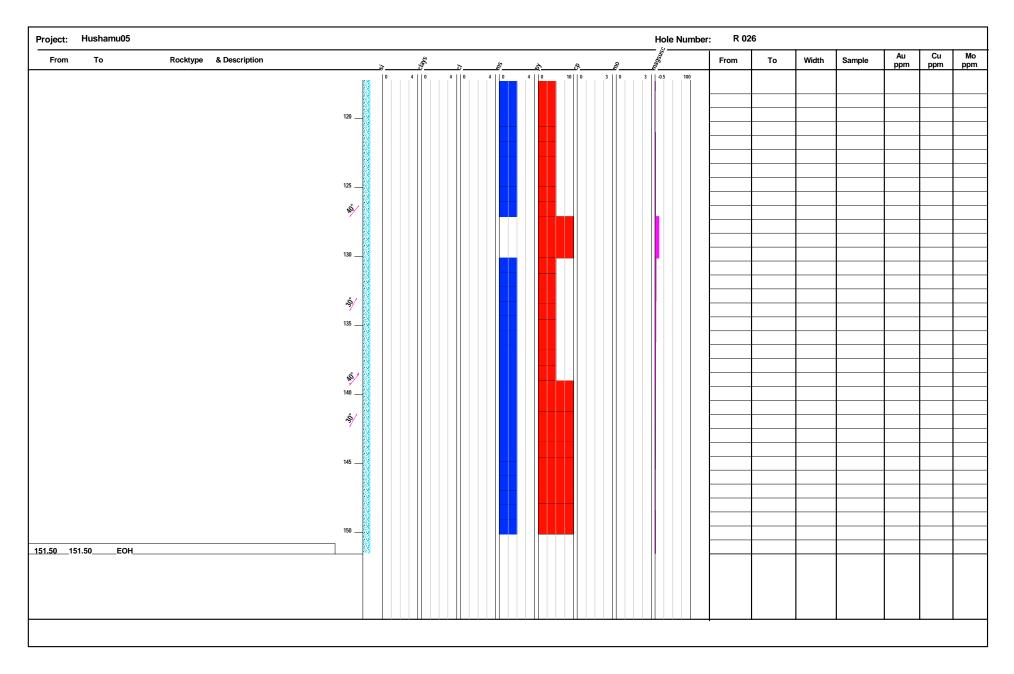
Equity Engineering Ltd.

\* depth component not to scale

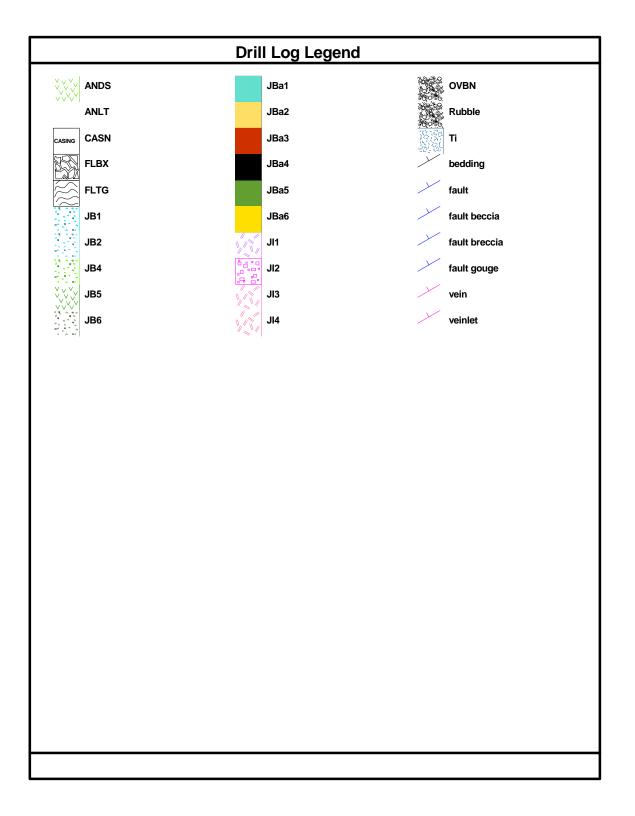
\* AVG indicates averaged duplicate samples

\* AVG indicates averaged duplicate samples

2006/04/13



\* AVG indicates averaged duplicate samples





Project:	Collar Elevation (m):
Rupert	35.0
Hole	Azimuth (°):
R 027	360
Location: 5604997 m North	Dip (°):
615796 m East	-90.0
Logged by:	Length (m):
J.Lehtinen	139.30
Drilled by:	Horizontal Projection:
Driftwood Drilling	
Assayed by:	Vertical Projection:
ALS Chemex-Vancouver	
Core Size:	
NQ	
Date Started: Date Completed:	
2005/11/23 2005/11/27	
Dip Tests By:	
none	
Objective	

#### **Summary Log:**

0.0 to 64.0: CASING

64.0 to 71.8: ANDESITE LAPILLI TUFF (JB2): medium to light green, fine-grained, common calcite veins, mCL, MS, wEP, CA minor PY

71.8 to 72.2: FAULT GOUGE

72.2 to 76.6: ANDESITE (JB1): pale to dark green, sMS, local MT and HE alteration

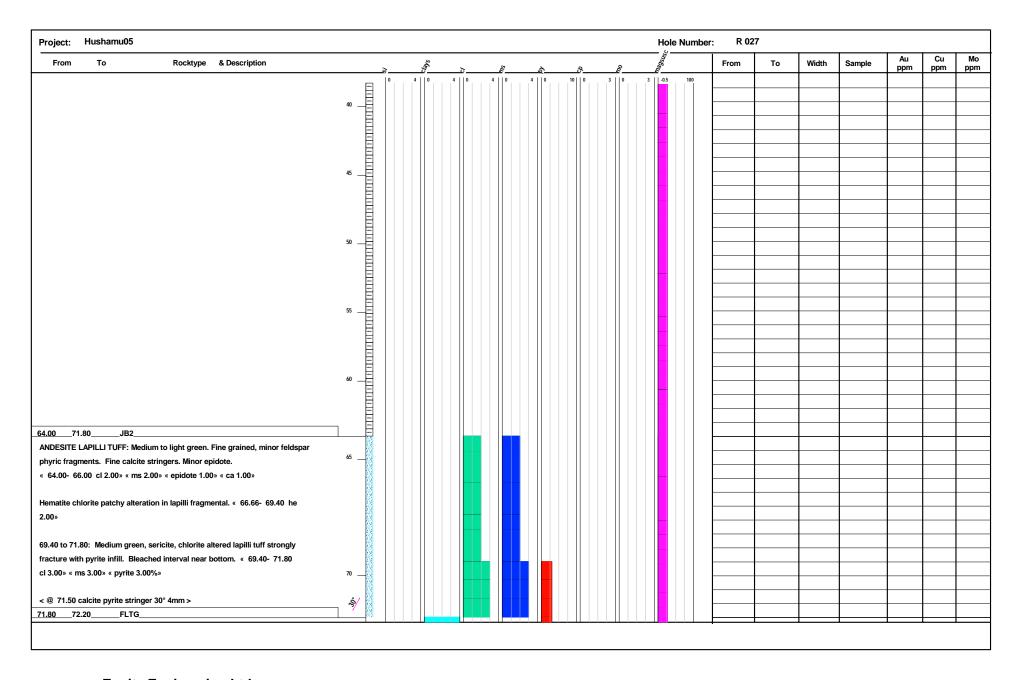
76.6 to 77.3: FAULT GOUGE

77.3 to 139.3: ANDESITE LAPILLI TUFF (JB2): medium green, fine-grained, common calcite and zeolite veins, mCL, wEP, CA minor PY, localized MS alteration

EOH = 139.30

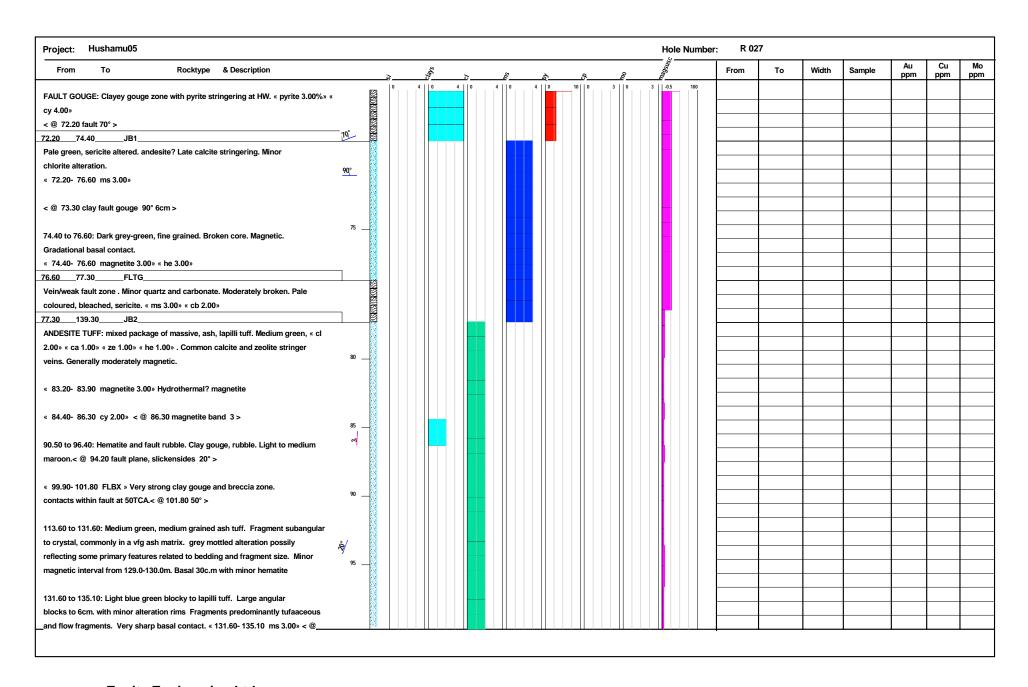


\* depth component not to scale



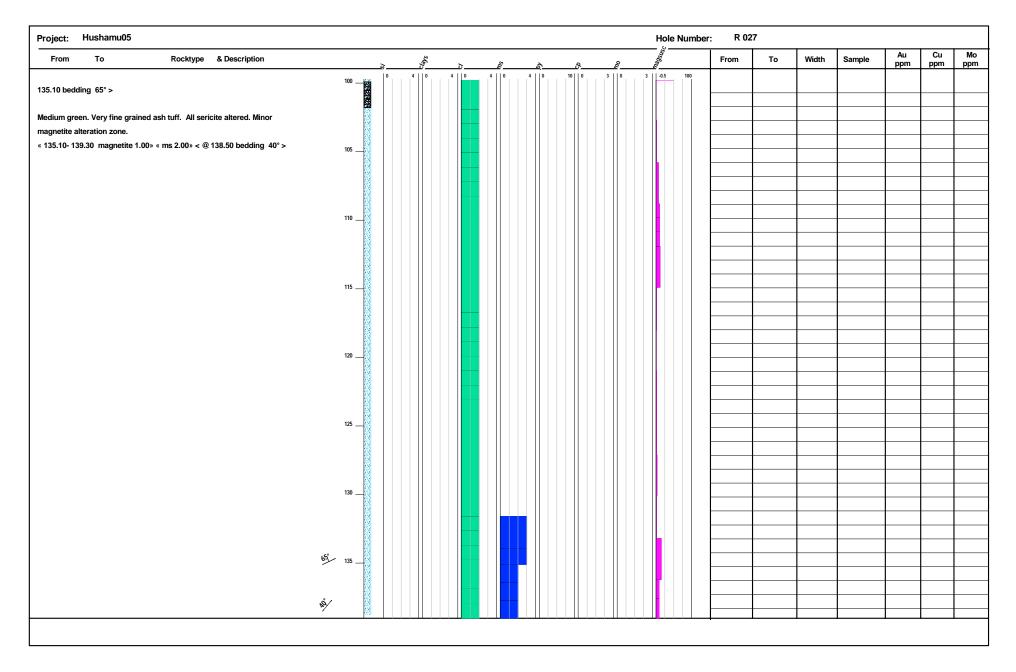
2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 2 of 5

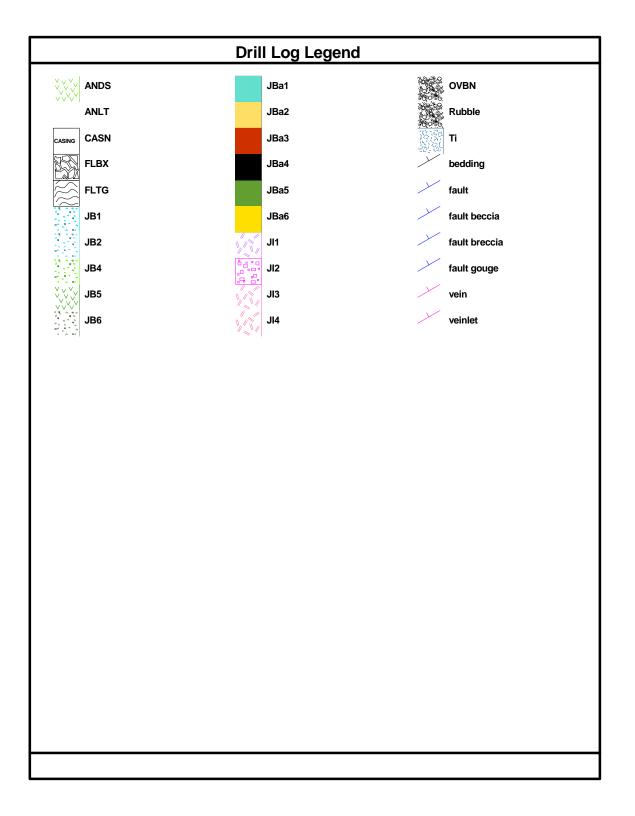


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\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 3 of 5









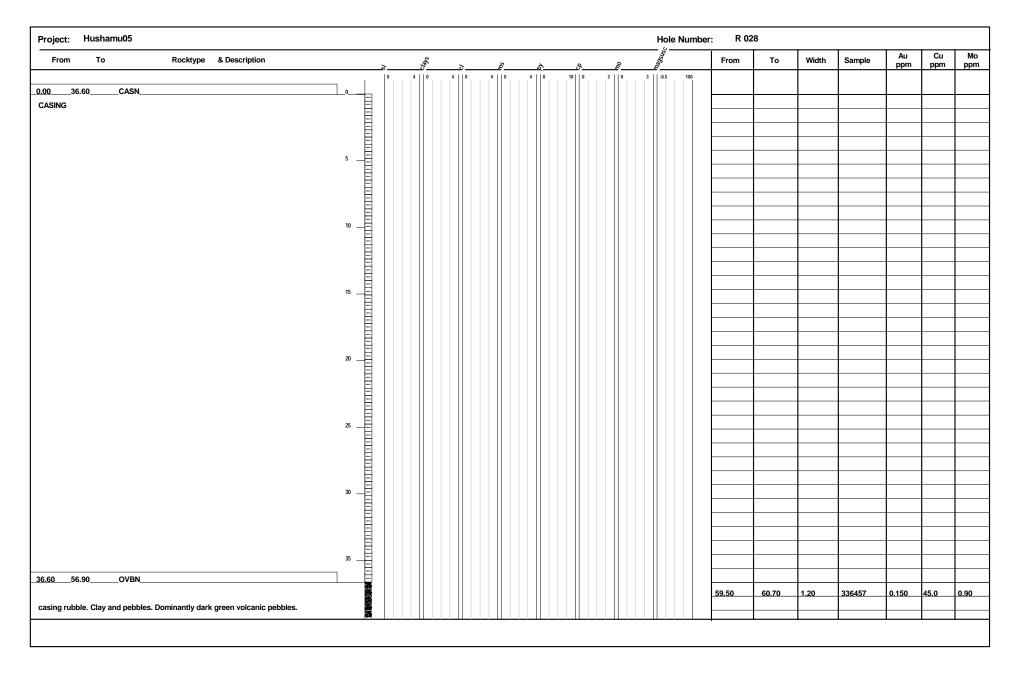
Collar Elevation (m):
42.0
Azimuth (°):
360
<b>Dip (°):</b> -90.0
Length (m): 66.40
Horizontal Projection:
Vertical Projection:

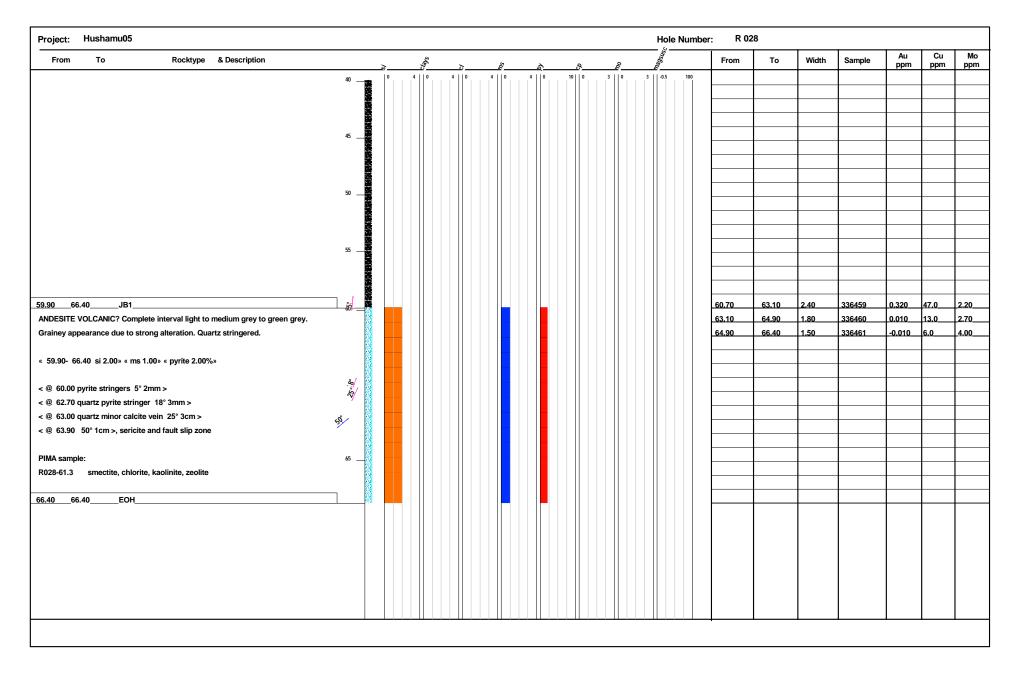
# **Summary Log:**

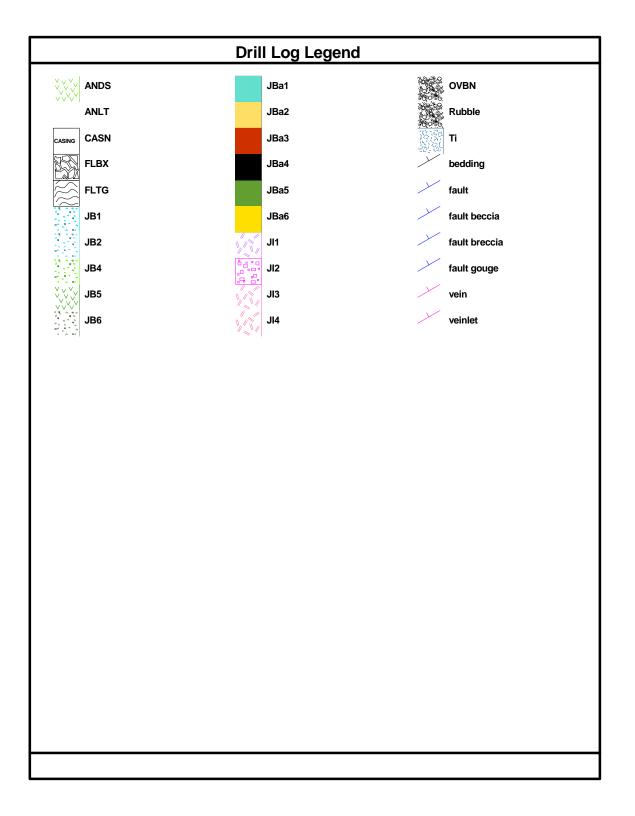
0.0 to 59.9: CASING

59.9 to 66.4: ANDESITE VOLCANIC ROCK (JB1): light to medium grey green, sSI, w MS, 2% PY

EOH = 66.40, casing twisted off, hole lost.









Collar Elevation (m):
47.0
Azimuth (°):
360
<b>Dip (°):</b> -90.0
Length (m): 134.40
Horizontal Projection:
Vertical Projection:

### **Summary Log:**

0.0 to 54.9: CASING

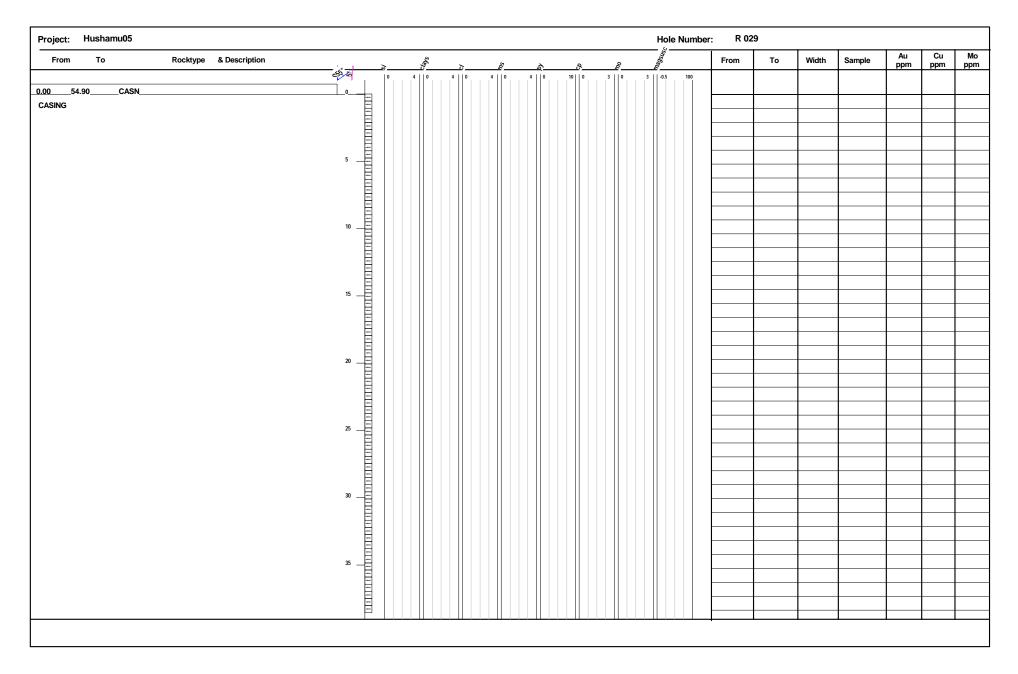
54.9 to 90.7: ANDESITE LAPILLI TUFF (JB2): dark grey-black with minor lighter sericitized zones, mSI, sMT alteration, 5% PY throughout

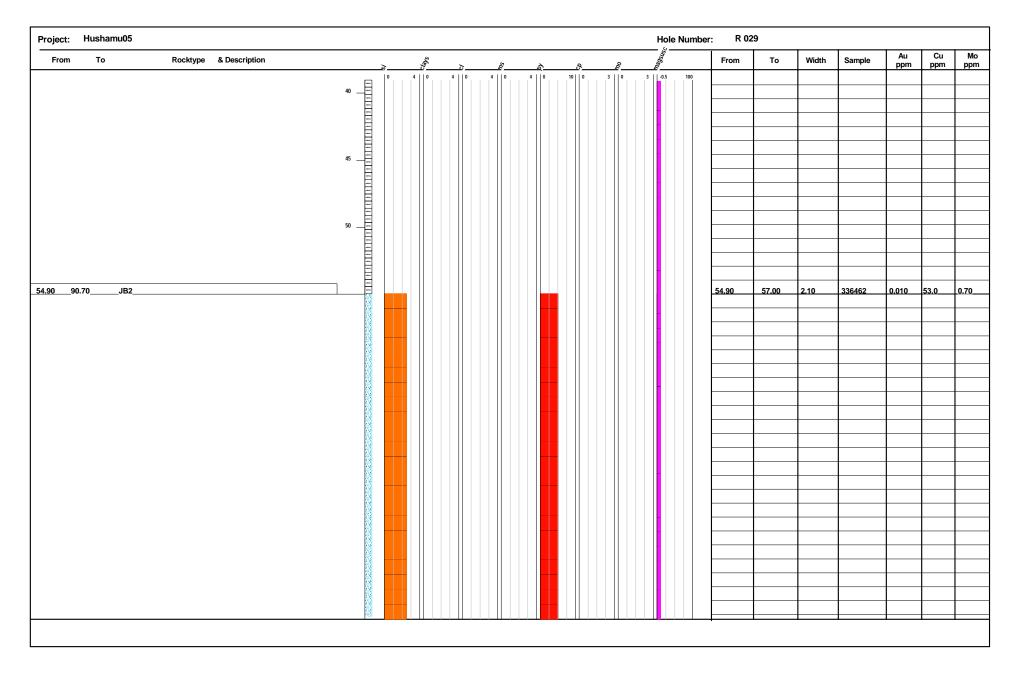
90.7 to 105.5: ANDESITE (JB1): dark green to black, variably stringered with quartz, magnetite in dark intervals

105.5 to 110.0: FAULT BRECCIA

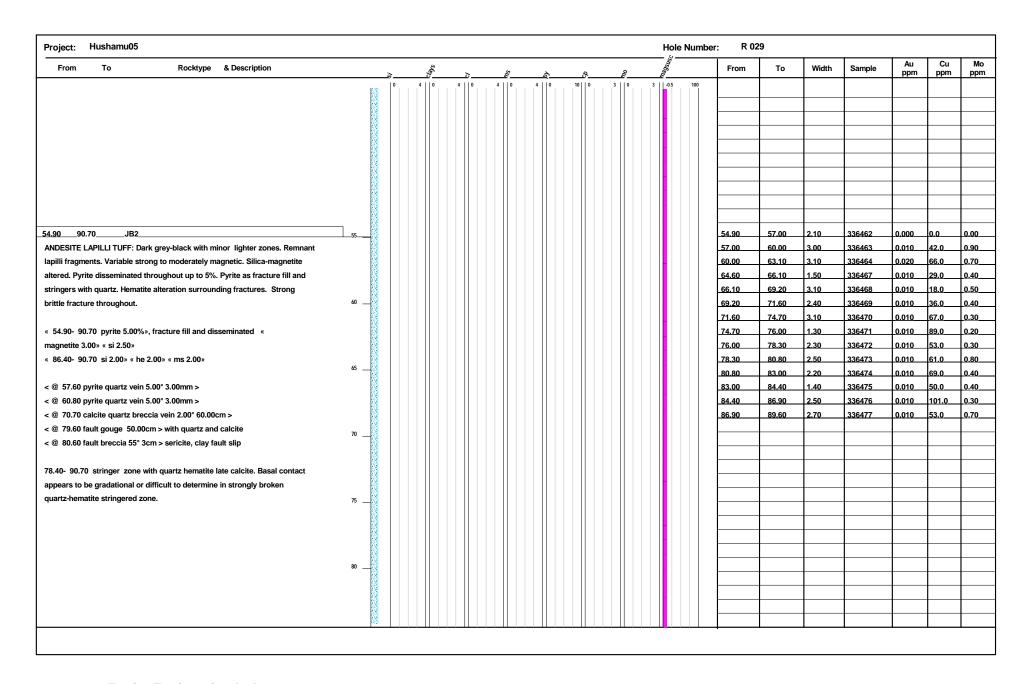
110.0 to 134.4: ANDESITE (JB1): medium green, mHE, SI, MS altered, possible BI alteration, 3% PY

EOH = 134.40



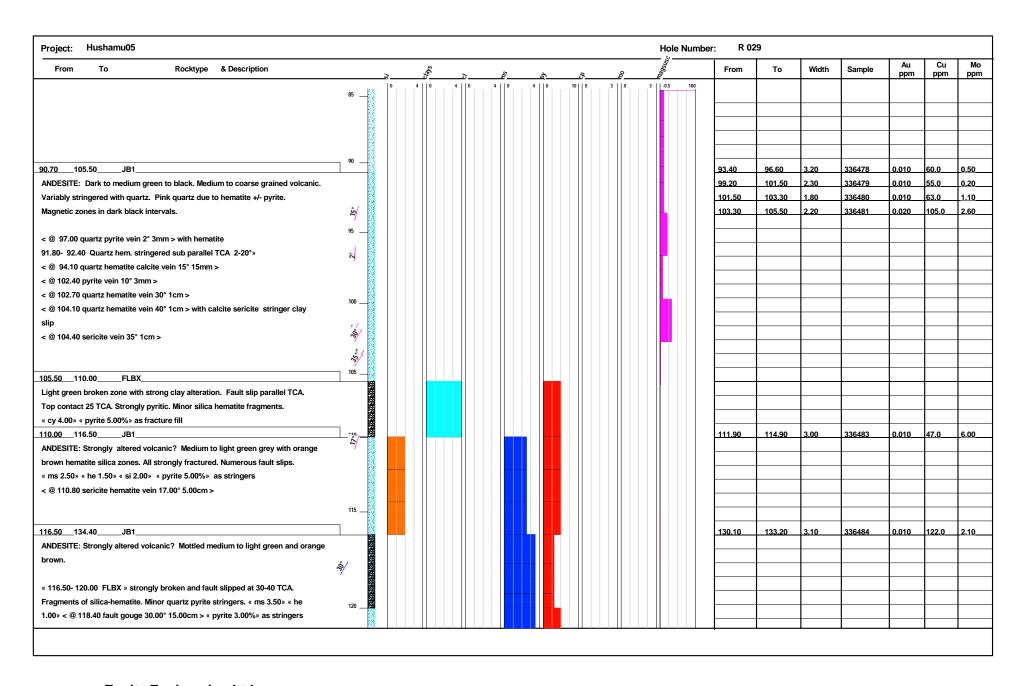


\* AVG indicates averaged duplicate samples



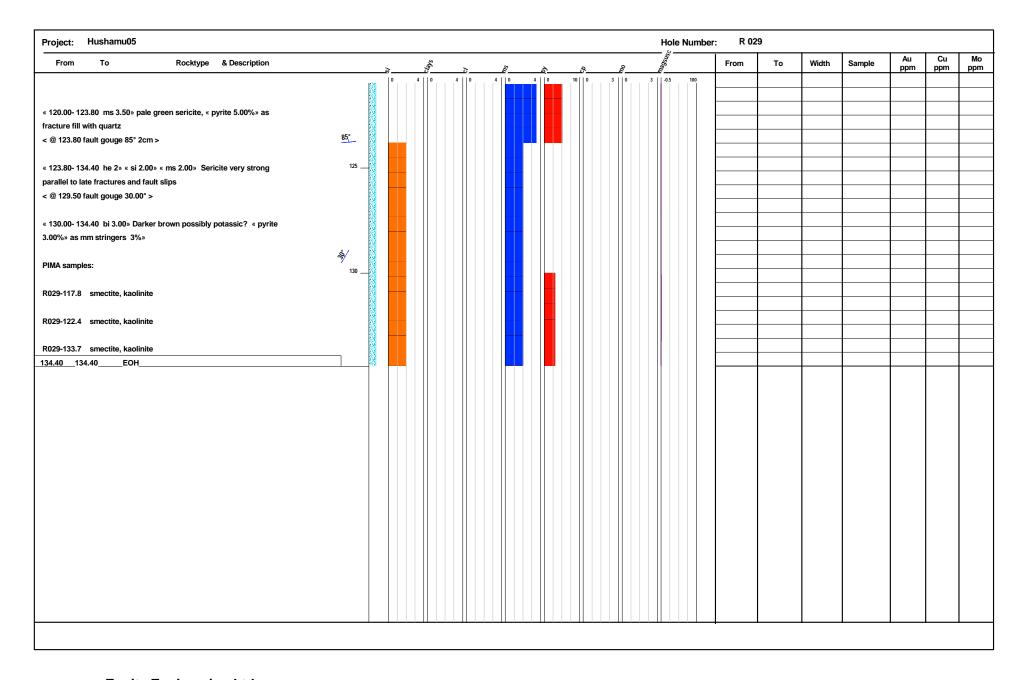
2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 3 of 5



2006/04/13 Equity Engineering Ltd.

\* depth component not to scale \* AVG indicates averaged duplicate samples \* Page 4 of 5



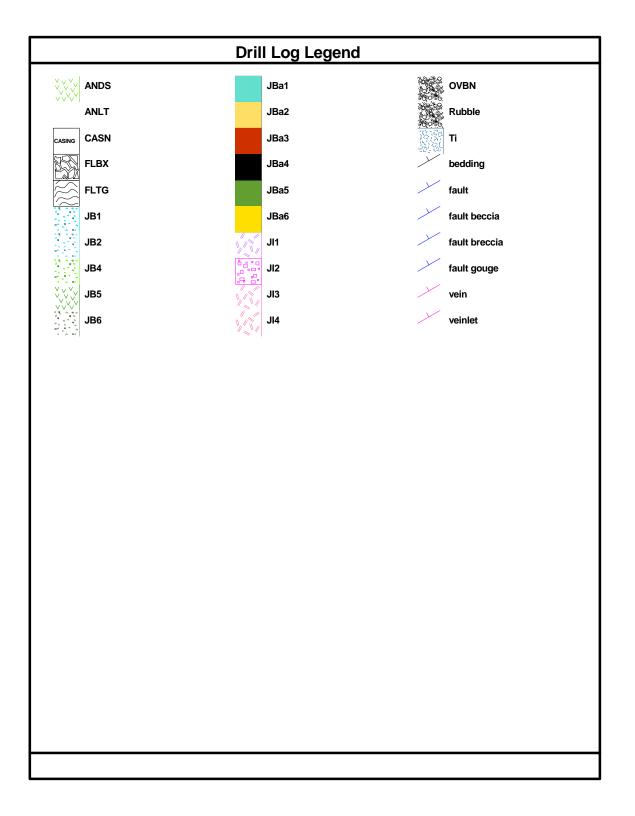
Equity Engineering Ltd.

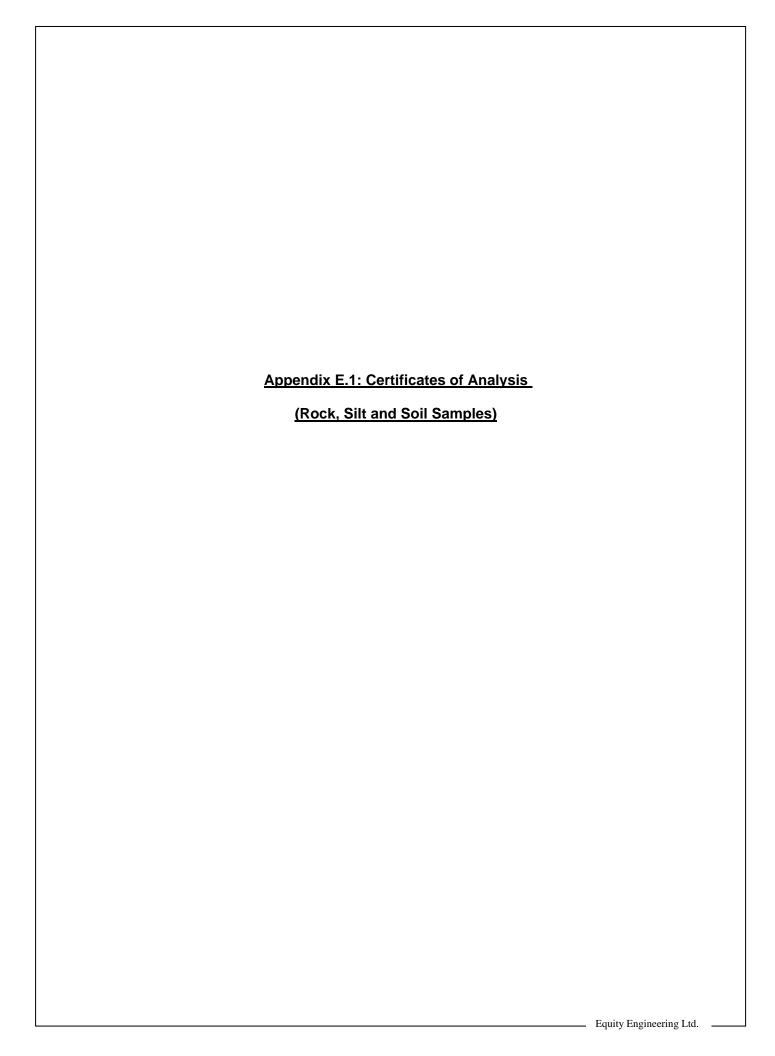
\* depth component not to scale

\* AVG indicates averaged duplicate samples

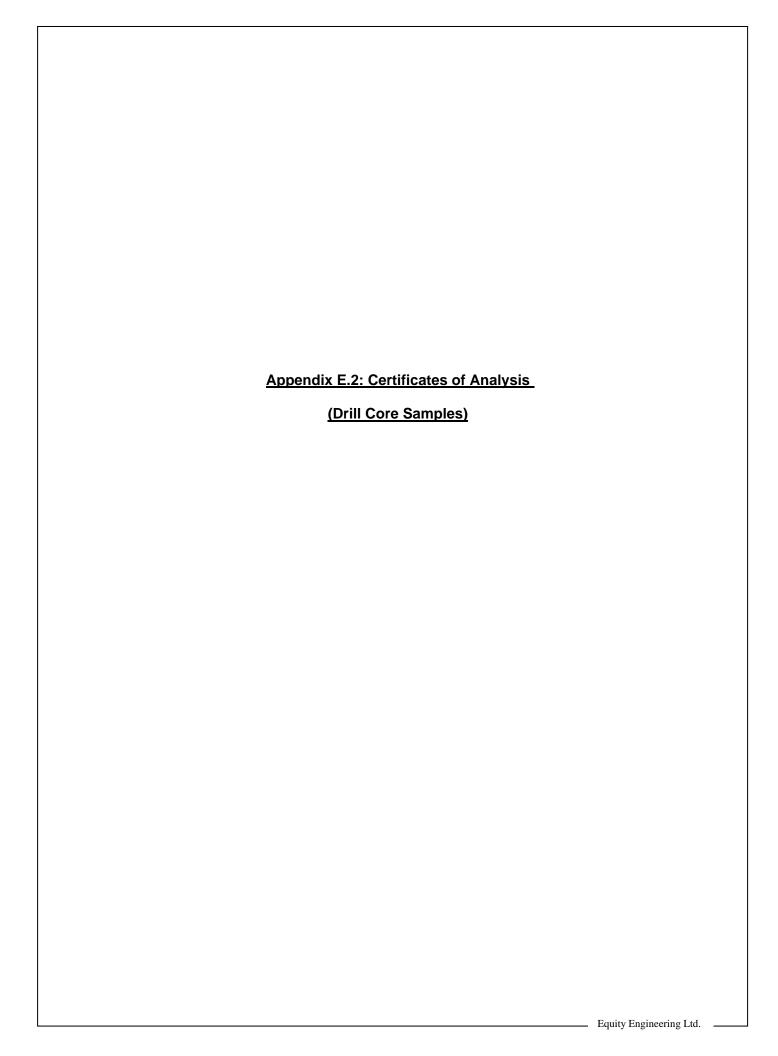
\* AVG indicates averaged duplicate samples

2006/04/13





| No. | No.



VA05102319 - Finalized
CLIENT: EIA - Equity Engineering Ltd.
# of Samples: 14
DATE RECEIVED: 2005-11-23 DATE FINALIZED: 2005-11-29
PROJECT: Hushamu
CERTIFICATE COMMENTS:
PO NUMBER: LCC05-01

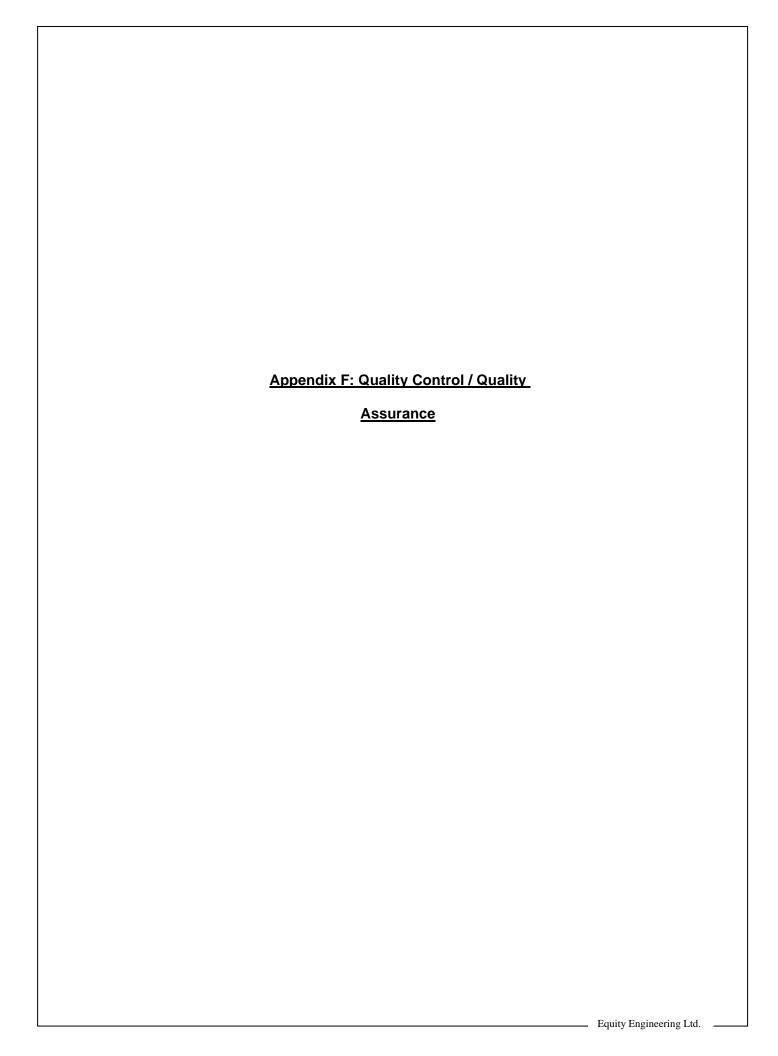
I O NOMBLIC.	LOC00 01																									
	Au-AA25	ME-ICP61a																								
SAMPLE	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Мо	Na	Ni	Pb	S	Sb	Sr	Ti	V	Zn
DESCRIPTION	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm									
N336401	0.17	1	5.26	760	3300	<10	<20	2.14	<10	10	120	70	3.29	1.6	0.91	930	10	0.33	50	200	0.4	450	230	0.27	130	260
N336402	0.01	<1	8.16	<50	500	<10	<20	4.73	<10	20	10	130	4.39	0.8	1.72	1270	<10	2.7	10	<20	0.5	<50	440	0.35	120	70
N336403	< 0.01	1	8.49	<50	700	<10	<20	5.19	<10	10	20	<10	4.65	1.1	1.88	1290	<10	2.61	<10	<20	0.3	<50	450	0.39	130	70
N336404	0.01	1	8.17	<50	800	<10	<20	6.05	<10	10	10	10	5.08	1.8	1.72	1560	<10	0.76	<10	<20	1.2	<50	340	0.37	140	80
N336406	< 0.01	1	8.1	<50	600	<10	<20	4.52	<10	20	20	<10	4.31	1.8	1.59	970	<10	1.75	<10	<20	0.6	<50	380	0.35	140	60
N336407	0.01	1	8.21	<50	400	<10	<20	5.43	<10	20	20	10	4.78	1.1	1.78	1010	<10	2.19	10	<20	0.3	<50	300	0.38	160	50
N336408	< 0.01	<1	8.31	<50	900	<10	<20	5.26	<10	20	50	130	5.41	2.7	1.96	1260	<10	1.89	10	<20	1.5	<50	460	0.42	190	70
N336409	< 0.01	<1	0.06	<50	<100	<10	<20	< 0.05	<10	<10	<10	<10	< 0.05	<0.1	< 0.05	<10	<10	< 0.05	<10	<20	<0.1	<50	<10	< 0.05	<10	<20
N336410	0.01	1	7.77	<50	600	<10	<20	4.79	<10	20	50	50	4.58	1.5	2.12	1040	<10	2.33	10	<20	0.2	<50	430	0.38	160	70
N336411	< 0.01	1	7.51	<50	700	<10	<20	3.96	<10	20	50	40	4.54	1.9	2.16	1080	<10	2.62	10	<20	0.2	<50	440	0.39	160	70
N336412	< 0.01	<1	7.77	<50	700	<10	<20	4.08	<10	20	50	30	4.67	1.9	2.16	1110	<10	2.85	20	<20	0.1	<50	470	0.39	160	70
N336414	< 0.01	<1	8.03	<50	300	<10	<20	6.3	<10	30	70	40	5.21	0.9	2.72	1100	<10	1.85	20	<20	0.1	<50	360	0.43	210	70
N336416	0.05	<1	7.47	<50	300	<10	<20	6.05	<10	20	100	40	5.51	0.8	2.85	1220	<10	1.45	10	<20	0.2	<50	330	0.45	220	80
N336417	0.01	<1	7.7	<50	300	<10	<20	5.89	<10	30	90	40	5.49	0.9	2.9	1190	<10	1.74	20	<20	0.2	<50	350	0.45	210	70

VA05104840 - Finalized
CLIENT: EIA - Equity Engineering Ltd.
# of Samples: 39
DATE RECEIVED: 2005-11-30 DATE FINALIZED: 2005-12-09
PROJECT: Hushamu
CERTIFICATE COMMENTS:
PO NUMBER: LCC05-01

PO NUMBER : L																										
	Au-AA25	ME-ICP61a	ME-ICP61a	ME-ICP61a	aME-ICP61a	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	eME-ICP61	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
SAMPLE	Au	Ag	Al	As	Ва	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	V	Zn
DESCRIPTION	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
N336418	< 0.01	<1	8.49	<50	300	<10	<20	4.56	<10	20	10	100	7.25	1.6	2.18	1080	10	0.7	20	30	3.3	<50	760	0.58	210	60
N336419	< 0.01	1	8.42	<50	500	<10	<20	1.95	<10	30	10	40	8.67	2.6	1.18	370	10	0.2	10	<20	9.3	<50	160	0.48	240	60
N336420	0.01	1	7.24	<50	200	<10	<20	1.61	<10	20	10	20	12.15	2.4	0.82	280	30	0.11	10	<20	13.6	<50	80	0.32	180	40
N336421	< 0.01	<1	8.9	<50	300	<10	<20	3.99	<10	20	<10	70	7.42	1.3	1.98	1180	<10	0.91	10	<20	4.5	<50	400	0.56	260	70
N336422	< 0.01	<1	9.19	<50	100	<10	<20	5.23	<10	30	30	80	7.62	0.5	2.12	1390	<10	1.84	30	<20	3.7	<50	590	0.58	280	80
N336423	< 0.01	<1	8.64	<50	200	<10	<20	4.7	<10	30	40	740	7.49	0.7	2.22	940	<10	1.24	30	<20	5.7	<50	550	0.52	260	70
N336424	0.02	43	4.48	50	600	<10	<20	1.12	<10	<10	20	4770	1.57	2.2	0.13	240	210	1.16	<10	60	0.7	100	320	0.06	30	60
N336425	< 0.01	<1	8.38	<50	200	<10	<20	4.65	<10	20	10	120	6.93	0.9	1.45	580	<10	1.4	10	<20	6.4	<50	540	0.43	180	60
N336426	< 0.01	<1	8.93	<50	100	<10	<20	4.85	<10	20	10	90	6.22	0.3	1.53	790	<10	2.32	20	<20	3.9	<50	610	0.51	210	50
N336427	< 0.01	<1	8.58	<50	200	<10	<20	4.58	<10	20	10	90	6.22	1	1.58	710	<10	1.75	10	<20	4.1	<50	460	0.5	200	50
N336428	< 0.01	<1	8.9	<50	300	<10	<20	4.16	<10	20	10	40	7.43	1.2	1.92	820	<10	0.78	<10	<20	5.8	<50	360	0.5	210	50
N336429	< 0.01	<1	9.23	<50	200	<10	<20	4.93	<10	20	10	90	6.83	0.4	2.56	920	<10	1.18	10	<20	1	<50	490	0.52	200	40
N336430	0.01	<1	8.68	<50	400	<10	<20	2.83	<10	20	10	70	7.37	1.4	2.82	910	<10	0.71	10	30	4.2	<50	440	0.49	200	80
N336431	<0.01	<1	9.66	<50	400	<10	<20	3.37	<10	20	10	30	7.14	0.7	2.34	750	<10	1.72	10	<20	2.4	<50	610	0.53	200	40
N336432	<0.01	<1	9.64	<50	200	<10	<20	4.12	<10	20	10	20	7.39	0.4	2.34	770	<10	1.69	10	<20	0.5	<50	510	0.53	210	40
N336433	0.01	<1	9.86	<50	300	<10	<20	3.87	<10	20	10	30	6.51	0.6	2.52	900	<10	1.71	10	<20	0.8	<50	580	0.53	210	40
N336434	0.01	<1	8.27	<50	600	<10	<20	1.81	10	20	10	70	9.27	1.7	1.66	430	10	0.67	10	<20	7.8	<50	230	0.35	160	670
N336435	0.01	1	8.34	<50	300	<10	<20	1.48	<10	20	10	10	9.01	2.8	1	360	10	0.15	10	<20	9.7	<50	170	0.34	200	110
N336436	0.01	<1	8.4	<50	300	<10	<20	1.35	<10	30	30	80	9.32	2.6	1.35	410	10	0.2	10	<20	9.8	<50	160	0.31	190	130
N336437	<0.01	<1	0.05	<50	<100	<10	<20	<0.05	<10	<10	<10	<10	< 0.05	<0.1	<0.05	<10	<10	< 0.05	<10	<20	<0.1	<50	10	< 0.05	<10	<20
N336438	<0.01	<1	8.22	<50	400	<10	<20	1.35	<10	20	10	30	7.84	2.6	1.28	300	10	0.2	10	<20	8.4	<50	90	0.34	190	40
N336439	0.01	<1	8.73	60	300	<10	<20	3.77	<10	20	10	80	7.76	0.8	1.38	490	<10	1.48	30	<20	6.1	<50	560	0.47	240	40
N336440	<0.01	<1	9.32	<50	200	<10	<20	5.16	<10	20	<10	50	6.94	0.2	2.24	1160	<10	1.92	<10	<20	2	<50	660	0.55	260	50
N336441	0.01	<1	7.76	<50	400	<10	<20	3.78	<10	30	10	100	9.73	1.4	1.08	490	10	0.67	10	<20	10	<50	250	0.42	190	80
N336442	<0.01	<1	8.77	<50	200	<10	<20	3.36	<10	20	10	70	5.89	0.5	2.19	770	<10	1.93	10	20	1.6	<50	460	0.5	200	50
N336443	0.01	<1	9.05	<50	400	<10	<20	3.92	<10	10	20	40	6.94	0.5	2.06	1070	<10	2.31	20	<20	0.3	<50	720	0.53	220	60
N336444	0.01	<1	9.22	<50	400	<10	<20	2.3	<10	30	30	70	8.2	2.4	1.1	340	<10	0.69	10	20	7.9	<50	320	0.4	230	170
N336445	0.01	<1	8.86	<50	400	<10	<20	2.23	<10	30	30	80	9.47	2.1	1.13	370	<10	0.79	<10	<20	9.6	<50	290	0.39	210	220
N336446	<0.01	<1	9.29	<50	400	<10	<20	2.28	<10	30	30	20	7.3	2.6	1.44	270	<10	0.56	10	<20	7.1	<50	230	0.39	220	40
N336447	0.01	<1	8.82	<50	300	<10	<20	3.33	10	20	40	90	6.96	1.3	2.01	410	<10	1.2	10	20	6.1	<50	580	0.4	230	520
N336448	0.01	<1	9.09	<50	100	<10	<20	4.46	<10	30	30	60	6.56	0.7	2.28	700	<10	1.57	30	<20	3.9	<50	490	0.48	250	50
N336449	0.01	<1	8.86	<50	300	<10	<20	3.33	<10	40	20	90	7.86	1.9	1.94	550	<10	0.53	30	20	6.3	<50	180	0.40	240	60
N336450	0.02	1	6.75	<50	300	<10	<20	1	<10	50	130	280	8.39	2.5	0.56	280	30	0.33	50	<20	ο.5	<50	50	0.4	200	30
N336451	0.02	<1	8.76	<50	700	<10	<20	2.25	<10	30	40	40	7.41	2.3	1.17	750	10	0.1	40	<20	6	<50	170	0.25	230	40
N336451	<0.01	<1	8.79	<50	400	<10	<20	2.84	<10	30	30	50	7.41	1.9	2.36	1670	10	0.47	30	<20	4.6	<50	110	0.48	250	140
								2.84 1.79	_			40	7.85 9.59	2.5	2.36 1.18			0.25			4.6 9				230	60
N336453	0.01	<1 -1	7.81	<50	300 500	<10	<20		<10	20	40 30	_				690 370	20 -10		30	<20	-	<50	60 40	0.4		
N336454 N336455	0.01	<1 -1	7.8	<50	500 600	<10	<20	0.6 1.76	<10 <10	20 30	20 40	40 100	7.47	1.8 2.4	0.8 2.12	270	<10	0.07 0.26	30 20	<20	7.2 7.5	<50 <50	40 100	0.24 0.42	180 270	30 110
	0.01	<1 .1	8.68	<50	600	<10	<20		_	30 40			8.9			920	10			<20			100			
N336456	0.01	<1	8.72	<50	600	<10	<20	1.91	<10	40	30	140	8.66	2.2	2.25	1000	10	0.38	20	<20	6.4	<50	140	0.42	240	100

VA05104840 - Finalized
CLIENT: EIA - Equity Engineering Ltd.
# of Samples: 39
DATE RECEIVED: 2005-11-30 DATE FINALIZED: 2005-12-09
PROJECT: Hushamu
CERTIFICATE COMMENTS:
PO NUMBER: LCC05-01

PO NUMBER : L																										
	Au-AA25	ME-ICP61a	ME-ICP61a	ME-ICP61a	aME-ICP61a	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	eME-ICP61	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61	aME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a	ME-ICP61a
SAMPLE	Au	Ag	Al	As	Ва	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Sr	Ti	V	Zn
DESCRIPTION	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
N336418	< 0.01	<1	8.49	<50	300	<10	<20	4.56	<10	20	10	100	7.25	1.6	2.18	1080	10	0.7	20	30	3.3	<50	760	0.58	210	60
N336419	< 0.01	1	8.42	<50	500	<10	<20	1.95	<10	30	10	40	8.67	2.6	1.18	370	10	0.2	10	<20	9.3	<50	160	0.48	240	60
N336420	0.01	1	7.24	<50	200	<10	<20	1.61	<10	20	10	20	12.15	2.4	0.82	280	30	0.11	10	<20	13.6	<50	80	0.32	180	40
N336421	< 0.01	<1	8.9	<50	300	<10	<20	3.99	<10	20	<10	70	7.42	1.3	1.98	1180	<10	0.91	10	<20	4.5	<50	400	0.56	260	70
N336422	< 0.01	<1	9.19	<50	100	<10	<20	5.23	<10	30	30	80	7.62	0.5	2.12	1390	<10	1.84	30	<20	3.7	<50	590	0.58	280	80
N336423	< 0.01	<1	8.64	<50	200	<10	<20	4.7	<10	30	40	740	7.49	0.7	2.22	940	<10	1.24	30	<20	5.7	<50	550	0.52	260	70
N336424	0.02	43	4.48	50	600	<10	<20	1.12	<10	<10	20	4770	1.57	2.2	0.13	240	210	1.16	<10	60	0.7	100	320	0.06	30	60
N336425	< 0.01	<1	8.38	<50	200	<10	<20	4.65	<10	20	10	120	6.93	0.9	1.45	580	<10	1.4	10	<20	6.4	<50	540	0.43	180	60
N336426	< 0.01	<1	8.93	<50	100	<10	<20	4.85	<10	20	10	90	6.22	0.3	1.53	790	<10	2.32	20	<20	3.9	<50	610	0.51	210	50
N336427	< 0.01	<1	8.58	<50	200	<10	<20	4.58	<10	20	10	90	6.22	1	1.58	710	<10	1.75	10	<20	4.1	<50	460	0.5	200	50
N336428	< 0.01	<1	8.9	<50	300	<10	<20	4.16	<10	20	10	40	7.43	1.2	1.92	820	<10	0.78	<10	<20	5.8	<50	360	0.5	210	50
N336429	< 0.01	<1	9.23	<50	200	<10	<20	4.93	<10	20	10	90	6.83	0.4	2.56	920	<10	1.18	10	<20	1	<50	490	0.52	200	40
N336430	0.01	<1	8.68	<50	400	<10	<20	2.83	<10	20	10	70	7.37	1.4	2.82	910	<10	0.71	10	30	4.2	<50	440	0.49	200	80
N336431	<0.01	<1	9.66	<50	400	<10	<20	3.37	<10	20	10	30	7.14	0.7	2.34	750	<10	1.72	10	<20	2.4	<50	610	0.53	200	40
N336432	<0.01	<1	9.64	<50	200	<10	<20	4.12	<10	20	10	20	7.39	0.4	2.34	770	<10	1.69	10	<20	0.5	<50	510	0.53	210	40
N336433	0.01	<1	9.86	<50	300	<10	<20	3.87	<10	20	10	30	6.51	0.6	2.52	900	<10	1.71	10	<20	0.8	<50	580	0.53	210	40
N336434	0.01	<1	8.27	<50	600	<10	<20	1.81	10	20	10	70	9.27	1.7	1.66	430	10	0.67	10	<20	7.8	<50	230	0.35	160	670
N336435	0.01	1	8.34	<50	300	<10	<20	1.48	<10	20	10	10	9.01	2.8	1	360	10	0.15	10	<20	9.7	<50	170	0.34	200	110
N336436	0.01	<1	8.4	<50	300	<10	<20	1.35	<10	30	30	80	9.32	2.6	1.35	410	10	0.2	10	<20	9.8	<50	160	0.31	190	130
N336437	<0.01	<1	0.05	<50	<100	<10	<20	<0.05	<10	<10	<10	<10	< 0.05	<0.1	<0.05	<10	<10	< 0.05	<10	<20	<0.1	<50	10	< 0.05	<10	<20
N336438	<0.01	<1	8.22	<50	400	<10	<20	1.35	<10	20	10	30	7.84	2.6	1.28	300	10	0.2	10	<20	8.4	<50	90	0.34	190	40
N336439	0.01	<1	8.73	60	300	<10	<20	3.77	<10	20	10	80	7.76	0.8	1.38	490	<10	1.48	30	<20	6.1	<50	560	0.47	240	40
N336440	<0.01	<1	9.32	<50	200	<10	<20	5.16	<10	20	<10	50	6.94	0.2	2.24	1160	<10	1.92	<10	<20	2	<50	660	0.55	260	50
N336441	0.01	<1	7.76	<50	400	<10	<20	3.78	<10	30	10	100	9.73	1.4	1.08	490	10	0.67	10	<20	10	<50	250	0.42	190	80
N336442	<0.01	<1	8.77	<50	200	<10	<20	3.36	<10	20	10	70	5.89	0.5	2.19	770	<10	1.93	10	20	1.6	<50	460	0.5	200	50
N336443	0.01	<1	9.05	<50	400	<10	<20	3.92	<10	10	20	40	6.94	0.5	2.06	1070	<10	2.31	20	<20	0.3	<50	720	0.53	220	60
N336444	0.01	<1	9.22	<50	400	<10	<20	2.3	<10	30	30	70	8.2	2.4	1.1	340	<10	0.69	10	20	7.9	<50	320	0.4	230	170
N336445	0.01	<1	8.86	<50	400	<10	<20	2.23	<10	30	30	80	9.47	2.1	1.13	370	<10	0.79	<10	<20	9.6	<50	290	0.39	210	220
N336446	<0.01	<1	9.29	<50	400	<10	<20	2.28	<10	30	30	20	7.3	2.6	1.44	270	<10	0.56	10	<20	7.1	<50	230	0.39	220	40
N336447	0.01	<1	8.82	<50	300	<10	<20	3.33	10	20	40	90	6.96	1.3	2.01	410	<10	1.2	10	20	6.1	<50	580	0.4	230	520
N336448	0.01	<1	9.09	<50	100	<10	<20	4.46	<10	30	30	60	6.56	0.7	2.28	700	<10	1.57	30	<20	3.9	<50	490	0.48	250	50
N336449	0.01	<1	8.86	<50	300	<10	<20	3.33	<10	40	20	90	7.86	1.9	1.94	550	<10	0.53	30	20	6.3	<50	180	0.40	240	60
N336450	0.02	1	6.75	<50	300	<10	<20	1	<10	50	130	280	8.39	2.5	0.56	280	30	0.33	50	<20	ο.5	<50	50	0.4	200	30
N336451	0.02	<1	8.76	<50	700	<10	<20	2.25	<10	30	40	40	7.41	2.3	1.17	750	10	0.1	40	<20	6	<50	170	0.25	230	40
N336451	<0.01	<1	8.79	<50	400	<10	<20	2.84	<10	30	30	50	7.41	1.9	2.36	1670	10	0.47	30	<20	4.6	<50	110	0.48	250	140
								2.84 1.79	_			40	7.85 9.59	2.5	2.36 1.18			0.25			4.6 9				230	60
N336453	0.01	<1 -1	7.81	<50	300 500	<10	<20		<10	20	40 30	_				690 370	20 -10		30	<20	-	<50	60 40	0.4		
N336454 N336455	0.01	<1 -1	7.8	<50	500 600	<10	<20	0.6 1.76	<10 <10	20 30	20 40	40 100	7.47	1.8 2.4	0.8 2.12	270	<10	0.07 0.26	30 20	<20	7.2 7.5	<50 <50	40 100	0.24 0.42	180 270	30 110
	0.01	<1 .1	8.68	<50	600	<10	<20		_	30 40			8.9			920	10			<20			100			
N336456	0.01	<1	8.72	<50	600	<10	<20	1.91	<10	40	30	140	8.66	2.2	2.25	1000	10	0.38	20	<20	6.4	<50	140	0.42	240	100



#### **QUALITY CONTROL / QUALITY ASSURANCE**

# I Chain of Custody

All samples were packed in rice sacks and sealed with uniquely-numbered non-resealable security straps. Rice sacks were trucked to the Greyhound station in Port Hardy and then transported via bus to ALS Chemex Labs in North Vancouver. ALS Chemex reported that all bags were received in good condition, with all security straps intact, and with no evidence of tampering.

## II Blank Samples

Blanks are samples which are known to be barren of mineralization and are inserted into the sample stream to determine whether contamination has occurred after sample collection.

#### a. Drill Core Blanks

Two blank samples (one every 40 samples) were inserted into the Rupert drill core sample sequence during the 2005 drill program. Silica sand of the type used in swimming pool filters was used for the blank material. The two samples returned below detection values for gold, arsenic, copper, molybdenum, lead, zinc and most other elements. Thus, there is no evidence of contamination.

# III Lab Duplicate Analysis

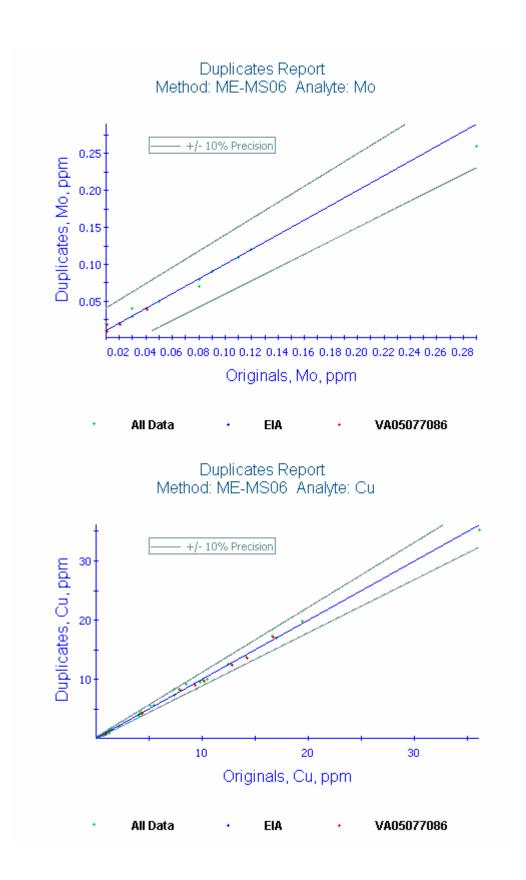
Lab duplicates are separate analyses of two portions of a prepared sample. They are used to measure the reproducibility of laboratory analyses. ALS Chemex Labs conducts duplicate analyses of random samples at varying frequencies depending on the particular sample preparation code. For example, the ICP analysis that was conducted on core samples (code ICP61a) is run in batches of 40 samples—one of which will be duplicated. Other analyses, such as fire assays of Au, are run in larger batches with more frequent duplicates.

# a. Soil Samples

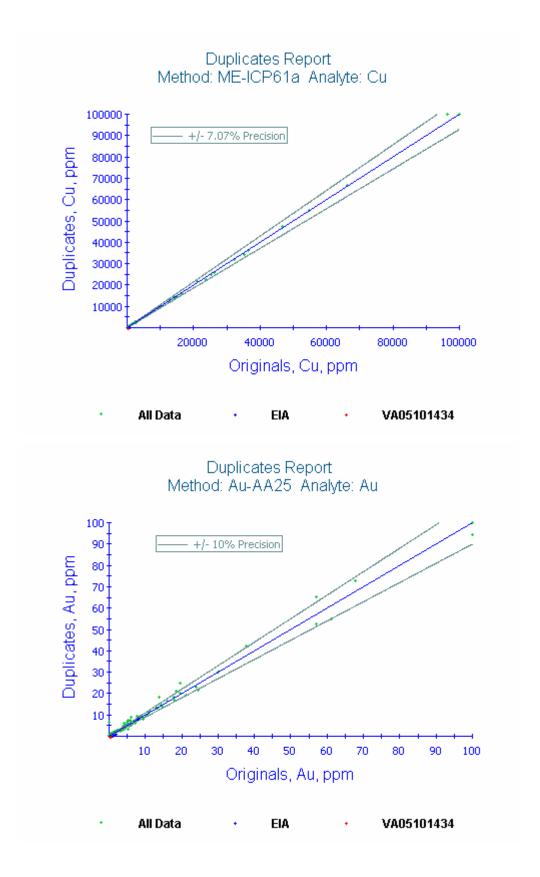
Charts 1 and 2 show ALS Chemex duplicate data for the ME-MS06 analytical code (hot hydroxylamine leach soil analysis) for the a five week period. The Rupert samples were analysed in the middle of this period. All analyses fall within a 10% precision envelop.

#### b. Drill Core Samples

Examination of Chemex's duplicates show that copper and molybdenum analyses neatly fall within the 10% precision envelop. Chart 3 shows the data for Cu but similar results occur for other metals of interest. Gold, by contrast is not reproducible at 10% precision, particularly at lower values. Nonetheless, the levels of precision shown by the charts are consistent with long-term laboratory performance.



Charts 1-2: Soil lab duplicates. Graphs from ALS Chemex's internal QA/QC program downloaded via the online Webtrieve system for Mo and Cu (ME-MS06 method). These data comprse all Chemex internal duplicate samples analyses during the time period from September 18 to October 24 during which the Rupert soil samples were analysed.



Charts 3-4: Core lab duplicates. Graphs from ALS Chemex's internal QA/QC program downloaded via the online Webtrieve system for Cu (ME-MS06 method) and Au (Au-AA23 method). These data comprise all Chemex internal duplicate samples analyses during the time period from November 23 to December 20, 2005 – the same period during which the Rupert core samples were analysed.

# IV Field Duplicate Samples

Field duplicates are collected and analysed as two separate samples from the same material. They are used to measure the reproducibility of sampling, which includes both laboratory variation and sample variation. Soil duplicates involve bagging two samples in the field from the same sight and core duplicates involve quartering of drill core.

# a. Soil Samples

Seven field duplicate soil samples were collected (approximately every 20<sup>th</sup> sample) during the 2005 program and submitted for analysis.

For the selective leach method, the elements of interest exhibit variable reproducibility. Most elements, including Mo, Pb, As, Zn and Ag are reproducible at 40% whereas Cu is reproducible at 80%. All Au samples returned results below detection limits. These data are typical of soil sample precision levels, although Cu is typically more precise than 80%.

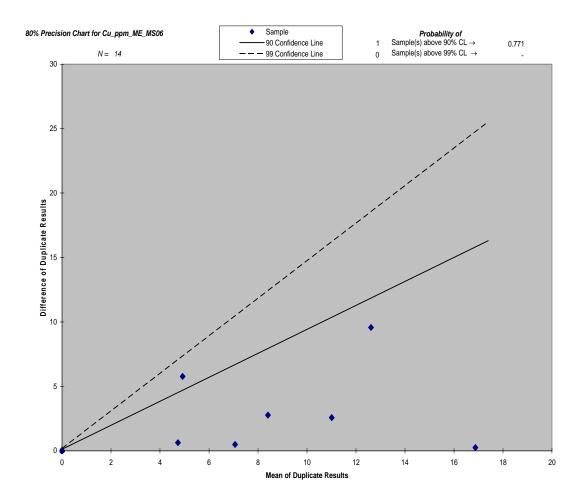


Chart 5: Graph illustrating Thompson and Howarth estimation of analytical precision, method two. The data points represent duplicate pairs, the solid line represents the 90th percentile of the population, and the dashed line the 99th percentile of the population (n=7 duplicate pairs). In this instance, the precision was set at 80%, and at this level within the given dataset, 1 sample falls above the 90th percentile line. From the binomial probability it can be read that at 80% precision, the probability of 1 sample out of 25 falling above the 90th percentile is 77.1%.

## b. Drill Core Samples

Two duplicate sample pairs were collected during the 2005 Rupert drill campaign (about one duplicate per 40 samples. The two pairs generally showed consistency of analyses and are reproducible at about 40% precision for the main elements of interest.

## V Standard Samples

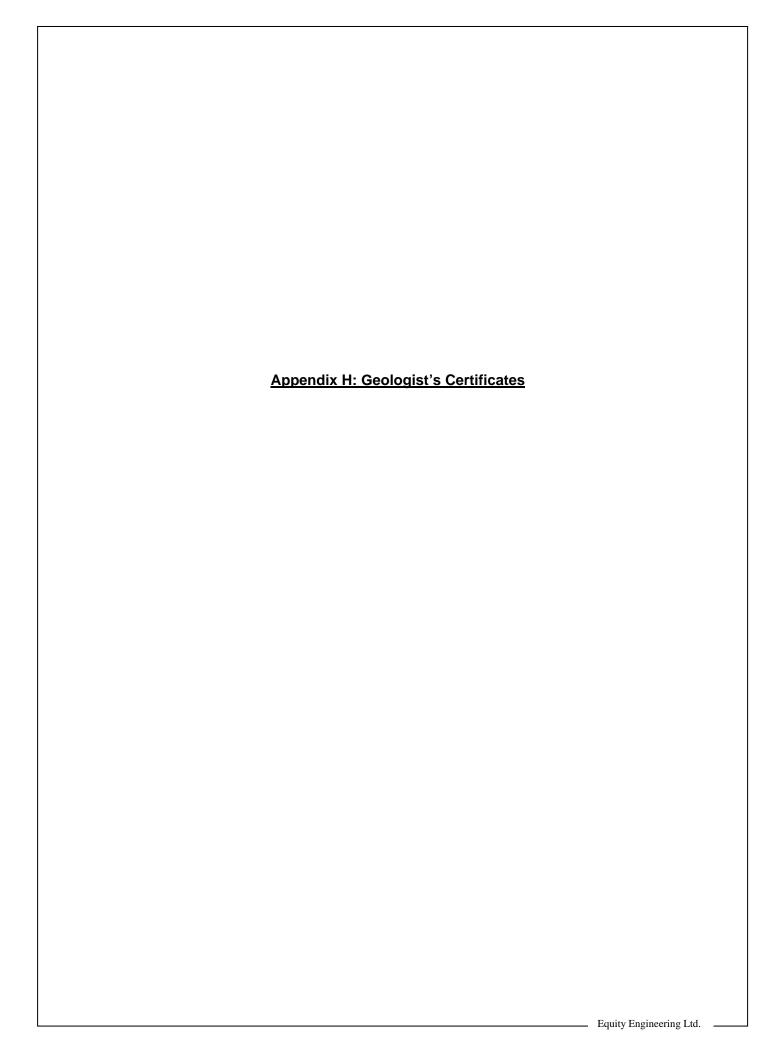
Three separate commercially available Cu or Au standards were inserted into the Rupert sample sequence at a frequency of about one standard per 30 samples. This resulted in three standard samples (one of each standard used). All returned analyses were within 10% of the accepted value for Cu and Au.

#### **VI Conclusions**

- There is no evidence of tampering with the samples between collection and laboratory.
- Laboratory preparation and analysis is reproducible at varied levels of precision, however it is considered that all elements attained an acceptable level of precision for soil and core samples.
- Silica sand is suitably devoid of metals and served as good blank material.
- Consistently low values for all metals of interest in blank analyses indicate that contamination of core or soil samples did not take place in the field, or in the lab.

Re	Appendix G: Compact Disc  Report text, geochemical and drill databases, geophysical files, drafting and plot files, photography	ohs

Equity Engineering Ltd.



#### GEOLOGIST'S CERTIFICATE

I, Darcy Baker, of 1003/1127 Barclay Street, Vancouver, in the province of British Columbia, DO HEREBY CERTIFY:

THAT I am a Geoscientist employed by Equity Engineering Ltd., with offices at #700-700 West Pender Street in the City of Vancouver, B.C., in the Province of British Columbia.

THAT I am a graduate of Dalhousie University (1997) with an Honours Bachelor of Science degree in Geology, and am a graduate of the University of Newcastle, Australia (2003) with a Doctor of Philosophy degree in Geology, and I have practiced my profession continuously since 1997.

THAT I am presently a Consulting Geologist and have been so since May 2003.

THAT this report is based on work carried out by Equity from February to December, 2005, and under my direction from August to December, 2005, on publicly available reports and on historical data provided to me by Lumina. I have examined the property in the field.

Dated at Vancouver, British Columbia, this 23 day of May , 2006.

Darcy Baker, Ph.D.