

Charlotte 3

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Geological, Prospecting, and Geochemical Report  
 on the  
**CHARLOTTE 3 Mineral Claim**  
 Skeena Mining Division

FILMED

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 VANCOUVER, B.C.

N.T.S. 104-B/7E  
 Latitude 56°30' North  
 Longitude 130°35' West  
 British Columbia

November 6, 1989

on behalf of  
**BACKER RESOURCES LTD.**  
 Vancouver, B.C.

**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

**19,666**

by

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**ABSTRACT**

The property consists of the CHARLOTTE 3 mineral claim, staked under the modified-grid system, totalling 18 units located approximately 80 km northwest of Stewart, British Columbia. Access to the property is by fixed-wing aircraft from Terrace, Stewart, or Smithers to various airstrips in the area and then via helicopter to the property.

The property lies within the Intermontaine Tectono-Stratigraphic Belt and occurs near the contact between the Stikine Terrane and the unmetamorphosed sediments of the Bowser Basin. The property is underlain by an assemblage of northerly striking interbedded argillite, chert, quartzite, and siltstone of the Upper Triassic Stuhini Group.

The area has an exploration history dating back to the turn of the century when prospectors passed through the region on their way to the interior. In the 1970's, the porphyry copper boom again brought prospectors and companies into the area. The current gold exploration rush began in 1980 with the option of the Sulphurets property by Esso Minerals Canada and the acquisition of the Johnny Mountain claims by Skyline Exploration Ltd. which was brought into production in mid-1988. The adjacent SNIP property is slated for production in 1990.

At this time, the Eskay Creek prospect, located 20 km northeast of the CHARLOTTE 3 claim and currently being explored by Calpine and Consolidated Stikine, is the most significant showing in the area. The prospect comprises at least eight mineralized zones occurring over a strike length of 1800 m within a sequence of felsic volcanics. The mineralization is associated with disseminated sulphides in felsic volcanic breccias and graphitic argillites in contact with overlying intermediate volcanic rocks.

A review of all available information indicates that no work has been filed for the specific area now covered by the CHARLOTTE 3 mineral claim.

The 1989 exploration program consisted of helicopter-supported reconnaissance prospecting, geological mapping, and geochemical sampling with the

objective of evaluating the property's potential for hosting economic precious metals deposits.

Brecciated chert containing a stockwork of quartz stringers was located in the west-central portion of the claim; however, lithochemical samples collected from the property did not yield any anomalous geochemical values. Two samples of highly fractured and sheared black argillite yielded weakly elevated Au and As values. Stream silt samples collected along the creek draining this area yielded elevated Ag, As, and/or Zn values.

Heavy mineral samples were collected from creeks draining the western portion of the property, and yielded elevated Ag, Cu, and Zn values. One sample yielded an anomalous gold value of 3847 ppb.

TABLE OF CONTENTS

INTRODUCTION . . . . .	1
Location and Access	
Property Status and Ownership	
Physiography and Climate	
PREVIOUS EXPLORATION . . . . .	5
REGIONAL GEOLOGY . . . . .	6
PROPERTY GEOLOGY . . . . .	9
ECONOMIC GEOLOGY . . . . .	13
1989 EXPLORATION PROGRAM . . . . .	16
ROCK GEOCHEMICAL SAMPLING . . . . .	17
STREAM SILT SAMPLING . . . . .	18
HEAVY MINERAL SAMPLING . . . . .	19
SUMMARY AND RECOMMENDATIONS . . . . .	20
CERTIFICATE - C. H. Aussant . . . . .	21
CERTIFICATE - D. G. DuPré . . . . .	22
BIBLIOGRAPHY . . . . .	23
APPENDIX:	
Summary of Personnel	
Rock Sample Descriptions	
Certificates of Analysis	
Analytical Techniques	

TABLES

1 - Table of Formations . . . . .	12
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FIGURES

1 - Location Map. . . . .	2
2 - Claim Map . . . . .	3
3 - Regional Geology - Bowser Basin . . . . .	7
4 - Regional Geology - Unuk Map Area. . . . .	8
5 - Property Geology. . . . .	10/11

MAPS

1 - Geology and 1989 Exploration Location and Results	
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## INTRODUCTION

Backer Resources Ltd. of Vancouver, British Columbia, commissioned Keewatin Engineering Inc. to conduct a field exploration program to be completed on the CHARLOTTE 3 mineral claim in the Unuk River area of northern British Columbia. Exploration was directed by Keewatin Engineering Inc. with geological support and field supervision provided by Taiga Consultants Ltd. as a sub-contractor to augment the Keewatin crew.

The objective of this program was to evaluate the property's potential for hosting economic precious metals deposits. Exploration consisted of prospecting, geological mapping, and geochemical sampling. Geochemistry included lithochemical, stream silt, and heavy mineral sampling.

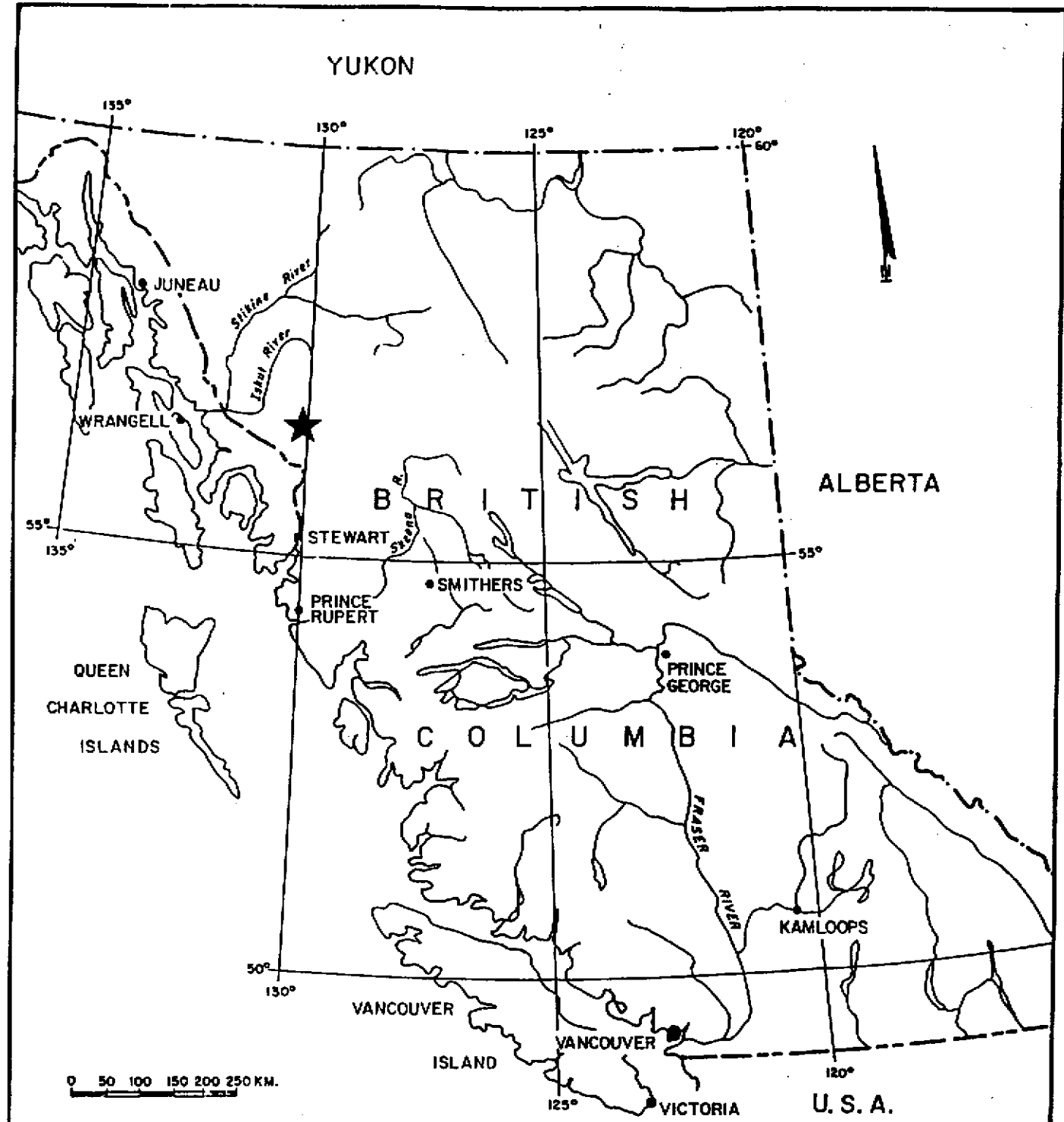
### Location and Access

The CHARLOTTE 3 mineral claim is located in northwestern British Columbia, approximately 80 km northwest of Stewart (Figure 1). The claims are situated within N.T.S. map-sheet 104-B/7E and centered about 56°30' North latitude and 130°35' West longitude. Access to the property is by fixed-wing aircraft from Terrace, Stewart, or Smithers to various airstrips in the area and then via helicopter to the property. The claims can also be directly accessed by helicopter from Stewart.

At some future date, road access to the area from the Stewart-Cassiar Highway could be obtained via the Upper Unuk River and Tiegen Creek valleys.

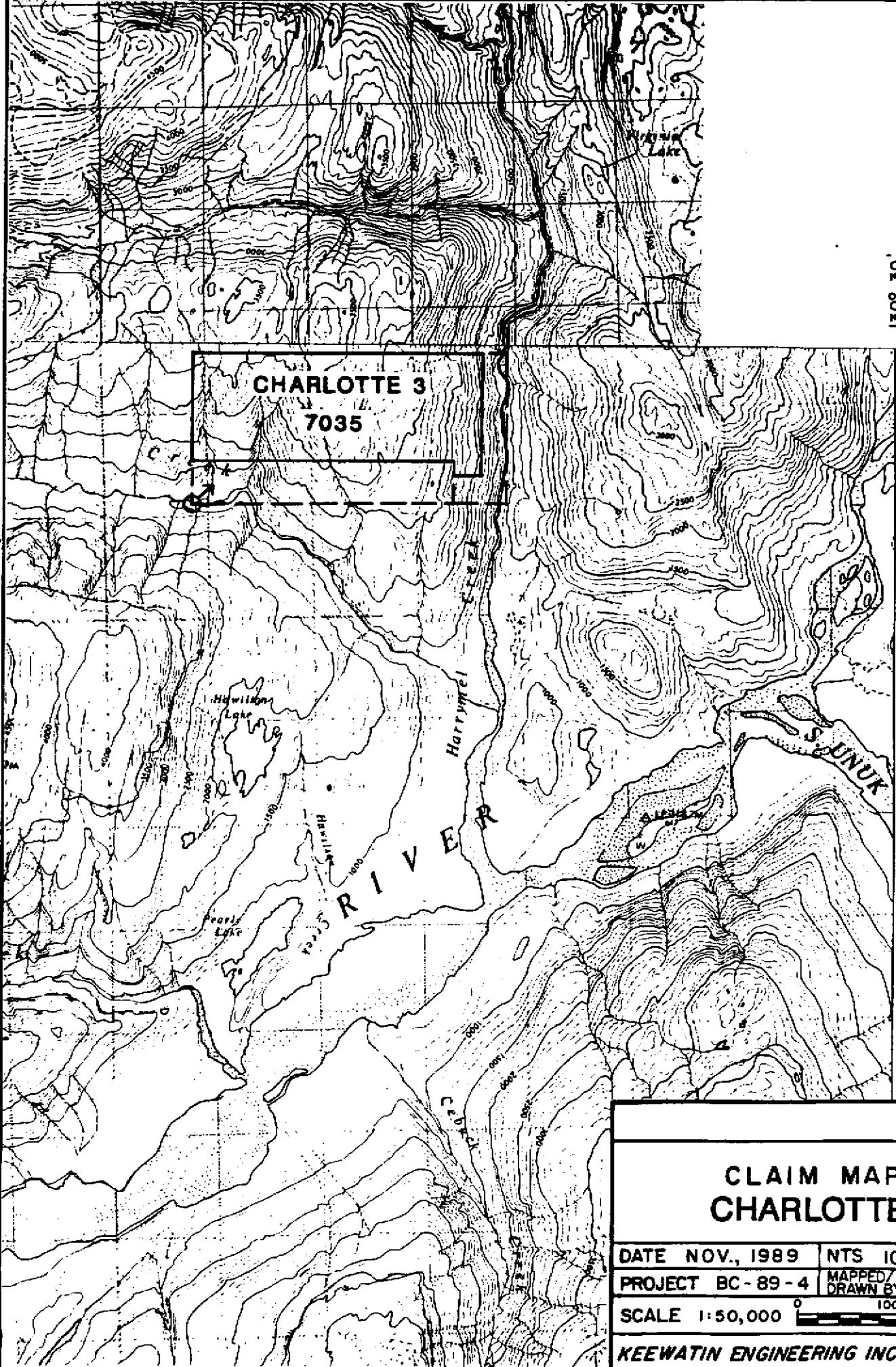
### Property Status and Ownership

The property consists of the CHARLOTTE 3 mineral claim (Figure 2) staked under the modified grid system. The claim consists of 18 units, and is located within the Skeena Mining Division. Relevant claim data are tabulated below:



★ PROPERTY LOCATION MAP

Figure 1



130° 30'

56° 30'

**CHARLOTTE 3**  
**7035**

**CLAIM MAP**  
**CHARLOTTE 3**

DATE NOV., 1989	NTS 104 B/7
PROJECT BC-89-4	MAPPED/ DRAWN BY
SCALE 1:50,000	0 1000 2000 m
KEEWATIN ENGINEERING INC.	FIG. 2

<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Date of Record</u>	<u>Expiry Date</u>
CHARLOTTE 3	7035	18	Dec.5,1988	1989

These claims are apparently the subject of an agreement between the claim holder (G. N. Ross) and Ross Resources Ltd., which has recently optioned the property to Backer Resources Ltd.

The claim records and maps show that the southern and eastern edges of the claim encompass pre-existing mineral claims.

### Physiography and Climate

The CHARLOTTE 3 mineral claim is situated within the Coast Range Physiographic Division and is characterized by northern rain forests and sub-alpine plateaux. Elevations (see Figure 2) range from 215 m in the valley of Harrymel Creek to 1100 m in the northern part of the property.

A transitional treeline, characterized by dense sub-alpine scrub, meanders through the property at approximately the 915 m elevation. Terrain above tree-line is typified by intermontane alpine flora. Conifers up to 30 m tall are common below treeline, especially in stream valleys. Water for camp and drilling purposes is generally in good supply from the numerous creeks draining the claim area.

Precipitation is heavy, exceeding 200 cm per annum, with short mild summers but very wet spring and fall periods. Thick accumulations of snow are common during winter. It is seldom possible to begin surface geological work before July and difficult to continue past September.



### PREVIOUS EXPLORATION

The area drained by the upper reaches of the Stikine, Iskut, Unuk, Craig, and Bell-Irving Rivers has been explored for gold since the late 1800's when prospectors passed through the region on their way to the interior. In the 1970's, the porphyry copper boom again brought prospectors and companies into the area. The current gold exploration rush began in 1980 with the option of the Sulphurets property by Esso Minerals Canada and the acquisition of the Johnny Mountain claims by Skyline Explorations Ltd. The Johnny Mountain deposit was brought into production in mid-1988, and the adjacent SNIP property is slated for production in 1990.

The mineralization at Eskay Creek was discovered in 1932, and active prospecting has continued sporadically since then. Two adits are the result of limited mining activity on this prospect. In 1988, Calpine Resources Incorporated discovered high-grade gold and silver mineralization on the '21 Zone' (*Northern Miner* - November 7, 1988). A number of excellent diamond drill intersections have been obtained to date, including drill hole CA-88-06 which encountered 96 feet of 0.752 oz/ton gold and 1.13 oz/ton silver. Based on the results of 70 drill holes completed to June 1, 1989, a preliminary geological ore reserve of 2.8 million tons grading 0.23 oz/ton gold and 3.3 oz/ton silver has been calculated for the '21 Zone' (Consolidated Stikine Silver Ltd. - 1989 Annual Report).

The Unuk River area was covered by regional geological mapping in 1988 as part of the Iskut-Sulphurets project carried out by B.C. Ministry of Energy, Mines and Petroleum Resources (Britton, et al., 1989). The whole of N.T.S. 104-B is currently being mapped by R. G. Anderson of the Geological Survey of Canada (Anderson, 1989).

The results of a regional stream sediment sampling program conducted over this area were released in July 1988 (National Geochemical Reconnaissance, 1988). Britton (et al.) report that almost every known precious metal prospect in the Unuk River area is associated with high stream sediment gold values. Known gold deposits are also associated with high but variable values for such

pathfinder elements as silver, arsenic, antimony, and barium. None of these samples were collected from the area of the CHARLOTTE 3 claim.

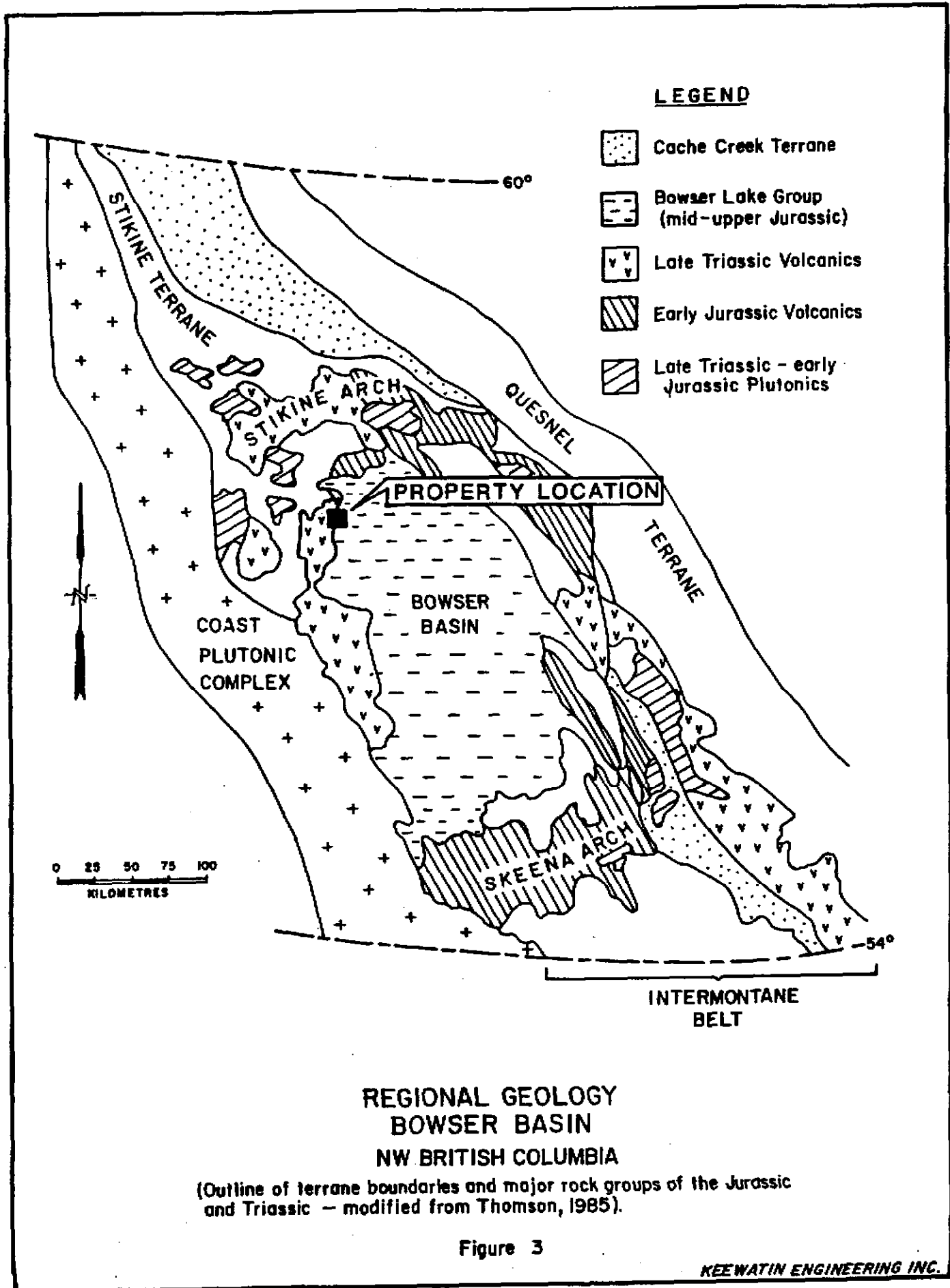
A review of the material in the B.C. Ministry of Energy, Mines and Petroleum Resources assessment report archives indicates that no work has been filed for the specific area now covered by the CHARLOTTE 3 claim. However, these files do show that the entire Unuk River area was subjected to reconnaissance geological mapping and prospecting by Newmont Mines Ltd. during the period 1959 to 1962. This work did not discover any promising showings or prospects on the present-day property. The assessment records (Korenic, 1982) indicate that Duval Corp. undertook a regional heavy mineral survey in the Unuk River area in 1981.

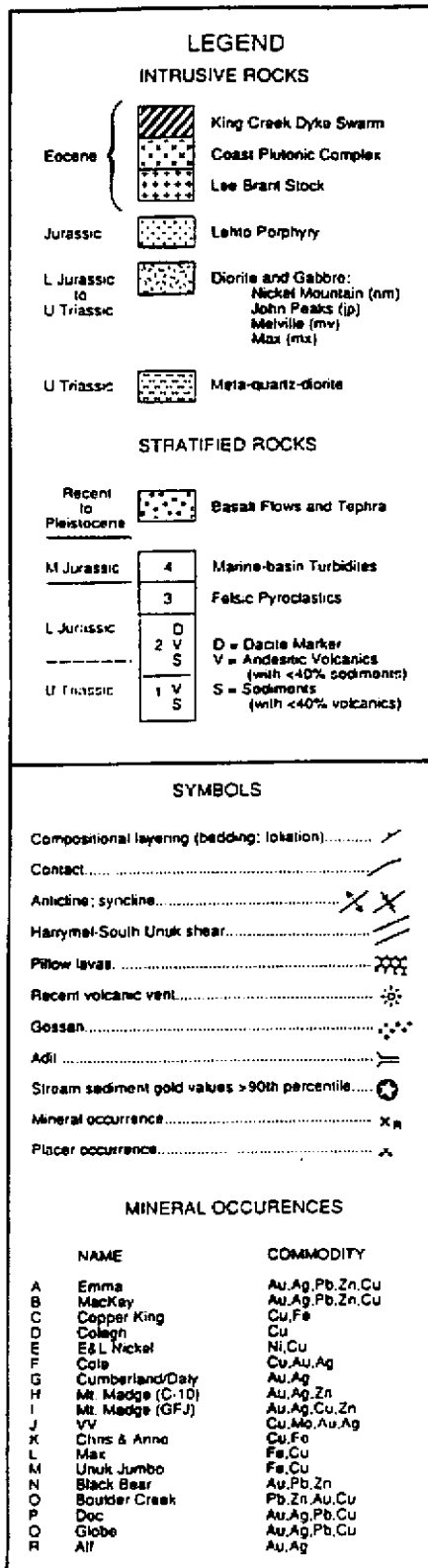
#### REGIONAL GEOLOGY

The property lies within the Intermontane Tectono-Stratigraphic Belt, one of five parallel northwest-southeast trending belts which comprise the Canadian Cordillera (Figure 3). The CHARLOTTE 3 mineral claim occurs near the contact between the Stikine Terrane, which makes up most of the western part of the Intermontane Belt, and the unmetamorphosed sediments of the Bowser Basin.

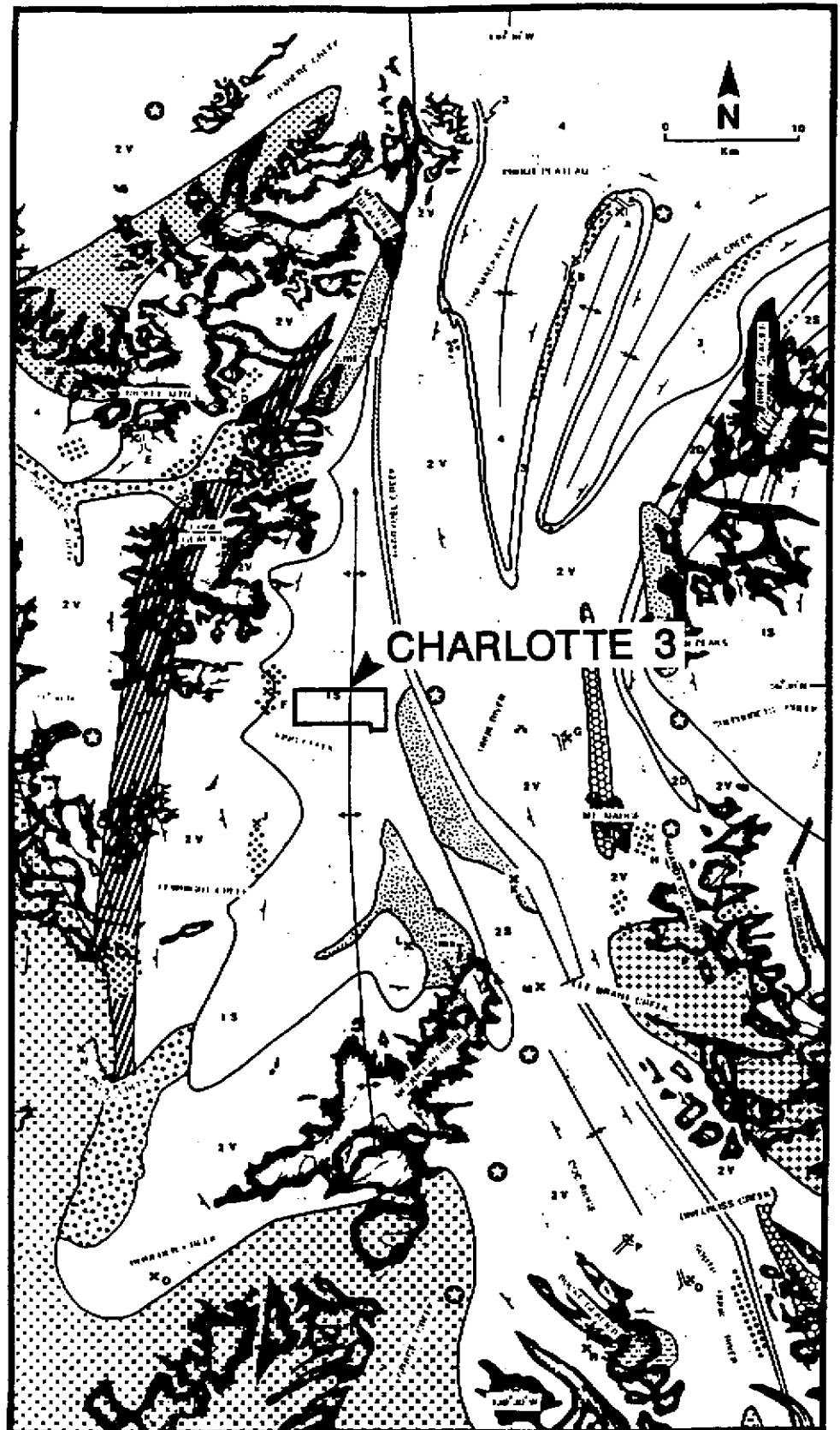
The Unuk River area (Figure 4) is underlain by a thick succession of Upper Triassic to Lower Jurassic volcano-sedimentary arc complex lithologies capped by Middle Jurassic marine basin lithologies. This package has been intruded by a variety of plutons representing at least four intrusive episodes spanning late Triassic to Tertiary time. These include synvolcanic plugs, small stocks, dyke swarms, isolated dykes and sills, as well as batholiths belonging to the Coast Plutonic Complex.

The stratigraphic sequence has been folded, faulted, and weakly metamorphosed during Cretaceous time, but some Triassic strata are polydeformed and may record an earlier deformational event. Remnants of Pleistocene to Recent basaltic flows and tephra are preserved locally.





NOTE: Not to scale



Geology and mineral deposits, Unuk map area.  
Modified after Britton et. al. (1989)

**PROPERTY GEOLOGY**

Figure 4

### PROPERTY GEOLOGY

Regional geological mapping by Britton et al.(1989) and exploration completed during the current program show that the property is underlain by Upper Triassic sediments of the Stuhini Group (Figure 5).

#### Upper Triassic Stuhini Group (Unit 1)

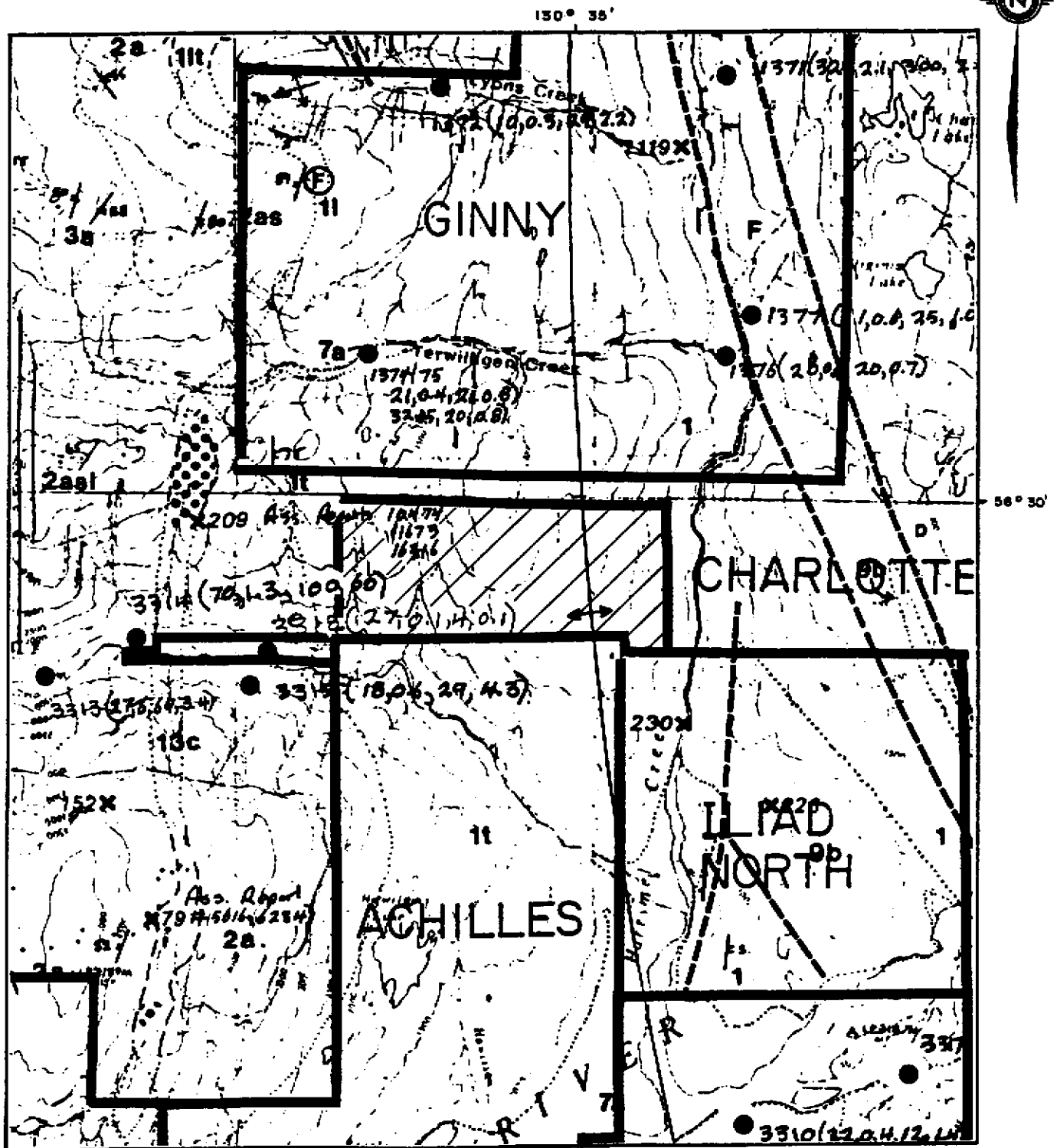
The Stuhini Group rocks occupy the nose of a north-plunging anticline, and occur as a wedge between the Harrymel-Unuk shear zone and the overlying Unuk River Formation. These rocks underlie the entire property, and consist of thin bedded siltstones, immature fine-grained wackes, chert, impure limestones, and andesitic tuffs that locally attain a considerable thickness. Andesitic tuffs may be laminated to massive, aphanitic to hornblende-feldspathic. Limestones occur as thin beds or discontinuous lenses that show extensive recrystallization and highly disrupted internal structure. Fossil evidence led Britton et al.(1989) to ascribe a Carnian to Norian age to these rocks.

#### Upper Triassic to Lower Jurassic Unuk River Formation (Unit 2)

These Norian to Sinemurian age rocks of the Unuk River Formation constitute the lowermost unit of the Hazelton Group. Britton et al.(1989) described this sequence as green and grey intermediate to mafic volcanoclastics and flows with locally thick interbeds of fine-grained immature sediments. The volcanics are reported to be dominantly massive to poorly bedded plagioclase ( $\pm$  hornblende) porphyritic andesite. The sediments are predominantly grey, brown, and green thinly bedded tuffaceous siltstone and fine-grained wacke. The basal contact with Triassic strata appears to lie near the top of a thick sequence of clastic sedimentary rocks. Neither an angular unconformity nor a widespread conglomerate marks the lower contact. Government regional geological mapping indicates this unit underlies the area immediately west of the property.

#### Structure

Actual fault surfaces or zones are rarely seen in the Unuk River area, but they are probably quite common and may have developed concurrently with regional folding. Britton et al.(1989) mapped several assumed faults to the southeast of the property. These are assumed to be normal faults and are described as megascopic structures with relatively little offset. The strata on the property define a broad north-plunging anticline with moderately dipping limbs.



SCALE 1:50,000

Modified after Britton et al (1989)  
NTS 104 B/10

## CHARLOTTE 3 PROPERTY GEOLOGY

Figure 5

**INTRUSIVE ROCKS**

**TERTIARY**

**13** COBBLE-BEARING SANDS  
 13a Laminar, calcareous, siliceous (flowed out channel)  
 13b Ring Crust Dike (basalt, dike-like porphyry dikes, andesite, diorite, quartz diorite)  
 13c Nonflow massive fine-grained basalt-andesite

**12** COAST PLACING COMPLEX  
 12a Slates green  
 12b Hornblende-biotite quartz diorite  
 12c Low Silica Basalt (Foliated porphyry, hornblende-biotite quartz andesite)

**JURASSIC**

**11** MICHEL MOUNTAIN GABBRIC: massive white-siliceous gabbro

**10** SWN TO POST-VOLCANIC (TRUSSIC): Porphyry to plioclastic material; possibly hydrothermal equivalent of volcanic rock

10a Little Porphyry: Sublinear-elongated hornblende porphyry granodiorite to syenite  
 10b Bare Lake Dike: flow to medium-grained hornblende diorite  
 10c Anderson-Oliver Complex: massive, flow to medium-grained diorite with abundant xenocrasts of dark green meta-andesite (possibly basaltic)

**9** UMLA RIVER DIORITE SLITE: medium- to coarse-grained, rock to intermediate matrix

9a John Potts megacrystic hornblende diorite  
 9b Mac Millan hornblende diorite; quartz diorite  
 9c Mackinac hornblende-quartz diorite to quartz diorite  
 9d One Ridge diorite megacrystic

**TRASSIC**

**8** BUCKE GLACIER STOCK: light grey, porphyry to foliated, medium-grained hornblende-biotite quartz diorite

**METAMORPHIC ROCKS**

**A-F** METAMORPHIC EQUIVALENTS OF UNITS 1, 2 AND 3

- A Metapelite: dark grey, calcareous quartz-feldspar-quartzite phyllite
- B Felsic metasediments: light green, quartz-feldspar-quartzite phyllite; locally with scattered lignite
- C Metite to siliceous metasediments: dark green, plagioclase-quartzite phyllite
- D Hornblende-plagioclase mylonite; mylonitic meta-basalt
- E Hornblende-plagioclase gneiss; quartzite equivalent
- F Strongly sheared rocks within the Umla-Hayward fault zone

**GOSSANOUS ALTERATION ZONES**



Pyrite ± quartz ± calcite ± hematite ± silite; locally dolomite in calcite

Disseminated pyrite in basic volcanic

**VOLCANIC AND SEDIMENTARY ROCKS**

(Note: No stratigraphic order is implied within sequences.)

**QUATERNARY**

**RECENT**

**17** UNCONSOLIDATED SEDIMENTS  
 17a Alluvium, glaciolacustrine deposits, sandstone, siltstone, calcareous  
 17b Alluvium overlain by Pleistocene to Recent basalt

**PLEISTOCENE TO RECENT**

**8** BASALT FLOWS AND SPHRA  
 8a Dark grey to black, basalt flows and spatters; minor pillow lavas  
 8b Basalt tephra

**TRASSIC TO JURASSIC**

**HAZELTON GROUP**

**MIDDLE JURASSIC (TOARCICAN TO BAJOICAN)**

**6** SILTSTONE SEQUENCE (Basal River Formation): Dark grey, well-bedded siltstone with minor sandstone and conglomerate

- 6a Clay pebble conglomerate and siltstone
- 6b Homotaxially bedded siltstone and shale (beddite)
- 6c Thinly bedded siltstone
- 6d Argillaceous siltstone and yellow breccias with minor siltstone interbeds

**LOWER JURASSIC (TOARCICAN)**

**4** FELSIC VOLCANIC SEQUENCE (Basal River Formation): Light weathering, intermediate to felsic pyroclastic rocks, including tuff, ash, crystal and lithic tuff, agate tuff, Laramie pyroclastic (S in 1974) and associated, minor subvolcanic (quartz) rhyolite

- 4a Thinly bedded agate tuff
- 4b Massive agate tuff
- 4c Black and white, calcareous rhyolite tuffstone; locally flow banded and subvolcanic

**LOWER JURASSIC (FLIENSACHIAN TO TOARCICAN)**

**3** PHYOCLASTIC/VOLCANIC SEQUENCE (Basal River Formation): Hornblende, grey, green, locally purple or maroon, massive to columnar pyroclastic and sedimentary rocks; pillow lava

- 3a Green and grey, massive to poorly bedded tuffstone
- 3b Grey, green and purple shaly tuff, agate tuff, crystal and lithic tuff; massive to well bedded, foliated phyllite
- 3c White weathering, shaly tuff and breccias with quartz clasts
- 3d Andesitic agate tuff with pink siliceous clasts
- 3e Argillaceous pillow lava and pillow breccias with minor siltstone interbeds
- 3f Black, shaly basaltic siltstone, shale and argillite (beddite)

**UPPER TRASSIC TO LOWER JURASSIC (NORMAN TO BRHEMERIAN)**

**2** ANDESITE SEQUENCE (Basal River Formation): Green and grey, interstratified to matrix volcanics and tuffs with locally thin interbeds of fine-grained calcareous sandstone; minor conglomerate and limestone

- 2a Grey and green, plagioclase ± hornblende porphyry andesite; massive to poorly bedded
- 2b Grey and green, hornblende ± plagioclase porphyry andesite and/or ash tuff
- 2c Grey, orange and green, shaly bedded, calcareous siltstone and fine grained siltstone
- 2d Black, shaly basaltic andesite (beddite); phalar argillite
- 2e Dark grey, matrix-supported conglomerate with granitic xenoliths
- 2f Grey, shaly basaltic andesite (locally very crystalline along Basin Umla valley)

**TRASSIC**

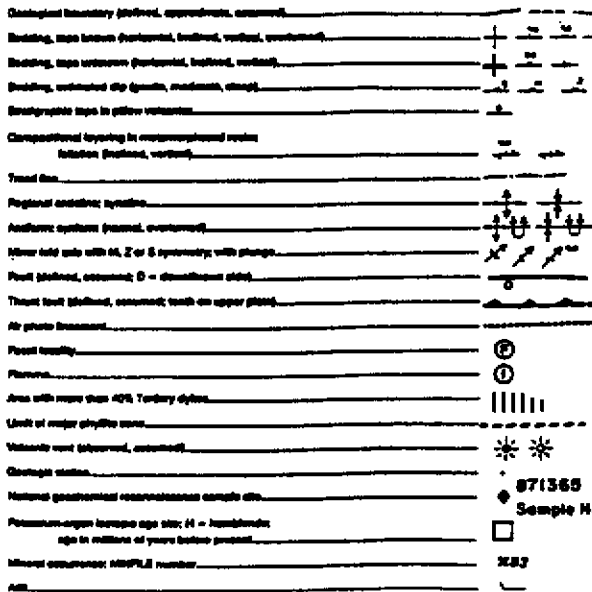
**STURIN GROUP**

**UPPER TRASSIC (CARMAN TO NORMAN)**

**1** LOWER VOLCANOCEDIMENTARY SEQUENCE: Black, black and grey, matrix sedimentary rocks interbedded with tuffs to dark green, rock to intermediate matrix and volcanoclastic tuffs

- 1a Grey to black, shaly bedded siltstone, shale, argillite (beddite)
- 1b Brown and grey, fine grained calcareous matrix; minor siltstone or conglomerate
- 1c Grey, lignite, silty, sandy limestone
- 1d Green, fine-grained, argillaceous ash tuff; foliated and bedded phyllite
- 1e Dark green basalt
- 1f Grey and green, granitic breccias with angular hornblende-quartzite clasts and argillaceous matrix

**SYMBOLS**



AGE	GROUPS	FORMATIONS	MEMBERS	LITHOLOGIES
Bathonian	Bowser Lake	Ashman	Main Sequence Basal Conglomerate	Turbidites, wackes, intraformational conglomerates Chert pebble conglomerates
Bajocian to Toarcian	Spatsizi(?)	Salmon River	Pyjama Beds Basal Limestone	Thin bedded, alternating siltstones and mudstones Gritty, fossiliferous limestone
Toarcian	Hazelton	Mount Dilworth	Upper Lapilli Tuff Middle Welded Tuff Lower Dust Tuff	Dacitic lapilli tuff with flow-banded clasts Dacitic welded ash flow and lapilli tuff Dacitic dust tuff
Pliensbachian		Betty Creek	Sedimentary Members Volcanic Members	Hematitic volcanoclastic sediments, and turbidites Andesitic to dacitic tuffs and flows
Sinemurian to Hettangian(?)		Unuk River	Premier Porphyry Upper Andesite Upper Siltstone Middle Andesite Lower Siltstone Lower Andesite	Two feldspar + hornblende porphyritic tuffs Massive tuffs with local volcanoclastic sediments Turbidites, minor limestones Massive tuffs and minor volcanoclastic sediments Turbidites Massive to bedded ash tuffs
Norian to Carnian	Stuhini		Volcanic Members Sedimentary Members	Pyroxene porphyry flows and tuffs Turbidites, limestones, conglomerates

TABLE 1. Table of Formations Unuk River Area



### ECONOMIC GEOLOGY

Britton et al.(1989) list 55 mineral occurrences in the Unuk map-sheet. These showings are predominantly gold/silver occurrences and are hosted by a number of various lithologies. Most can be classified into one of four categories: stratabound, vein, skarn, and disseminations. Grove (1986) has determined that the age of the mineralizing events is variable and, notably, can be post-Triassic.

Stratabound mineralization consists almost exclusively of pyritic zones and lenses contained within a particular stratum or a restricted set of strata. The best example is the Eskay Creek prospect, currently being explored by Calpine Resources Incorporated and Consolidated Stikine Silver Ltd. Intrusive-contact (skarn) deposits show a close spatial and temporal relationship with igneous intrusions. Three deposits in this category are the E & L nickel/copper deposit (Minfile #006), the Max copper/iron skarn (Minfile #013), and the Chris-Anne copper/iron skarn (Minfile #125). Britton et al.(1989) reported:

Mineralization at the E & L occurs within two medium- to coarse-grained, olivine-pyroxene gabbro bodies. These roughly triangular plugs are each approximately 1300 square metres in area and are probably connected. They intruded a sequence of argillites, tuffaceous siltstones, and grey dacitic ash tuffs that strike northwesterly with moderate to steep southwesterly dips. Mineralization consists of pyrrhotite, pentlandite, and chalcopyrite, with lesser amounts of pyrite and magnetite. In the northwestern gabbro, mineralization extends up to the contact with the sediments, whereas in the southeast gabbro, mineralization is confined to the pluton. Diamond drilling has delineated pipe-like pods and disseminations of sulphides to a depth of 120 metres. Drill-indicated reserves are 2.8 million tonnes of 0.7% Ni and 0.6% Cu (Sharp, 1965).

The Max prospect lies on the northwest side of McQuillan Ridge, between the Unuk and South Unuk Rivers, at elevations between 455 and 1500 metres. Massive magnetite with lesser pyrrhotite and chalcopyrite occur in skarn-altered sedimentary rocks adjacent to a diorite stock. Garnet, epidote, actinolite, and diopside characterize the skarn assemblage. Drilling has indicated a reserve of 11 million tonnes at 45% iron (Canadian Mines Handbook 1973-1974, page 432).

The Chris-Anne prospect lies approximately 3 kilometres east of the Max. Skarn mineralization is reported in limestone beds which are up to 10 metres thick and that are interbedded with volcanoclastics. Magnetite and pyrrhotite-rich layers, from 0.5 to 7 metres thick, with

minor chalcopyrite, extend over a distance of 1 kilometre. There are minor intrusive bodies reported on the property. Grades range from 0.1% to 0.4% copper (Allan and MacQuarrie, 1981).

The gold potential of these skarn deposits does not appear to have been tested. Based on recent skarn studies (Ettlinger and Ray, 1988), this area has many features that are associated with gold-enriched skarns elsewhere in the province: sequences of calcareous and tuffaceous host rocks; structural deformation; intrusion by dioritic I-type granitoids; and contact metamorphism and recrystallization. Some auriferous skarns are enriched in cobalt, an element that may be a useful pathfinder.

High-grade precious metal quartz veins are the target of exploration programs at Mount Madge (Minfile #240 and #233) by Bighorn Development Corporation, and at the Doc prospect (Minfile #014) by Echo Bay Mines Limited. Britton et al.(1989) reported:

The Mount Madge prospects are located south of Sulphurets Creek near its confluence with Unuk River, on the east and west sides of Mandy Glacier. Two different targets are being evaluated (Kruckowski and Sinden, 1988). On the west, the C-10 prospect (Minfile #240) is a stockwork of thin quartz veinlets, locally with thicker quartz lenses, in intensely altered, fine-grained tuffaceous andesite or dacite. Quartz veinlets locally form up to 30% of the rock. The alteration assemblage consists of quartz and sericite with up to 10% pyrite. Chalcopyrite and traces of sphalerite are also present. The rocks are strongly foliated to schistose and are very similar to the broad alteration zones seen at Brucejack Plateau 12 kilometres to the northeast (Britton and Alldrick, 1988). Soil samples locally return analyses in excess of 1 ppm gold.

Two kilometres to the east, Ken Konkin discovered a massive pyrite-siderite float boulder with visible gold. Prospecting uphill led to the discovery of the GFJ veins (Minfile #233), apparently flat-lying, zoned siderite-quartz-sulphide veins that returned assays up to 121 grams per tonne gold (Kruckowski and Sinden, 1988). The veins are poorly exposed. Float blocks seen this year display symmetrical zoning from margin to core across vein widths of 10 to 15 centimetres. Vein margins are 1 to 2 centimetres of thin white quartz layers separated by hairline accumulations of very fine-grained tin-white sulphide, probably arsenopyrite. The core is a very coarse-grained intergrowth of siderite, milky quartz, and cubes and clusters of pyrite, with lesser amounts of sphalerite and chalcopyrite as crystals and irregular masses. Rare tetrahedrite and visible gold have been observed (K.Konkin, personal communication, 1988). The veins cut variably foliated andesitic ash tuffs with thin interbeds of foliated to schistose siltstones.

The Doc prospect (Minfile #014) is located at treeline on a ridge overlooking the South Unuk River, opposite the mouth of Divebliss Creek. The prospect consists of several west-northwest trending quartz veins up to 2 metres wide that have surface strike lengths of up to 275 metres (Gewargis, 1986). The main veins (Q17, Q22) are massive white quartz with sparse sulphide mineralization (5% to 10%) consisting of galena, pyrite, chalcopyrite, and sphalerite, with associated specular hematite and magnetite. Precious metal values are mostly confined to the sheared edges of veins and immediately adjacent wallrock. Shear zones with very little quartz may also return good values. Seraphim (1948) observed that gold was associated with either specular hematite or with galena and pyrite, but not with chalcopyrite and pyrite assemblages. The veins are a true fissure type, crosscutting folded and metamorphosed andesitic tuffs and thin-bedded sediments, including marble, that have been intruded by irregular dioritic dykes or sills and small monzodioritic plugs. The veins are different from any others seen in the Sulphurets or Unuk map areas. They have very restricted wallrock alteration aureoles, no apparent zoning, and appear to be limited to a few large fluid pathways. In this, they display characteristics of mesothermal veins. Structural control of the vein sets has not been determined but may be due to fractures related to folds in the host rocks. Total mineral inventory of the Q17 and other veins is given as 426,000 tonnes with 9.26 grams per tonne gold and 44.91 grams per tonne silver (*Northern Miner*, November 7, 1988).

Porphyry-type disseminated pyrite, chalcopyrite, and molybdenite mineralization occurs immediately north and south of King Creek, west of Harrymel Creek. Two properties have been worked: the VV to the south and the Cole to the north.

The VV property (Minfile #079) is the site of a heavily weathered monzonitic intrusive body in fault contact, on the east and west, with layered andesitic lapilli tuffs and tuff breccias with minor siltstone and calcareous sandstone interbeds. The stock is 250 metres wide, at least 6 kilometres long, strikes northerly, and dips steeply to the west, parallel to the country rocks. Chalcopyrite occurs in quartz stockworks and as fine disseminations within the monzonite. Molybdenite, sphalerite, malachite, and azurite have also been reported (Winter and McInnis, 1975; Mawer et al., 1977). Representative assays give 0.34% copper, 0.003% molybdenum, 2.1 grams per tonne silver, and 0.8 gram per tonne gold. Maximum gold and silver values obtained were 8.65 grams per tonne gold and 19.54 grams per tonne silver (Mawer et al., 1977).

The Cole prospect (Minfile #209) is situated approximately 4 kilometres north of the VV claims; it appears to be on strike with the same fault system and has similar intrusive and country rocks. Mineralization consists of up to 10% pyrite as disseminations and fracture fillings. Minor chalcopyrite and malachite have been reported but the bedrock source of the gold/silver soil anomalies has not been located (Korenic, 1982; Gareau, 1983). Reported assays range up to 0.43%

copper, 7.12 grams per tonne gold, and 13.03 grams per tonne silver. Gold and copper values show a positive correlation on both properties.

At this time, the Eskay Creek prospect, located 20 km northeast of the CHARLOTTE 3 mineral claim, is the most significant showing in the area. This prospect comprises at least eight mineralized zones occurring over a strike length of 1800 m within a sequence of felsic volcanics (Mount Dilworth Formation). This property is currently being explored by Calpine and Consolidated Stikine Silver. Preliminary drilling on the '21 Zone' intersected 96 feet assaying 0.752 oz/ton gold and 1.13 oz/ton silver including 52.5 feet grading 1.330 oz/ton gold and 1.99 oz/ton silver (*Northern Miner*, November 7, 1988).

The drilling results obtained to date indicate that the '21 Zone' extends over 335 m and is open along strike and at depth. Based on the results of 70 drill holes completed to June 1, 1989, a preliminary geological reserve of 2.8 million tons grading 0.23 oz/ton gold and 3.3 oz/ton silver was calculated for the '21 Zone' (Consolidated Stikine Silver, 1989 Annual Report). These deposits have been variously described as silicified shear zones (Harris, 1985) or as volcanogenic deposits (Donnelly, 1976). The mineralization is associated with disseminated sulphides in felsic volcanic breccias and graphitic argillites in contact with overlying intermediate volcanic rocks.

A review of all the available information (Minfile, assessment reports, geological maps, reports, etc.) indicates that no mineralized occurrences are known within the area currently covered by the CHARLOTTE 3 claim.

#### 1989 EXPLORATION PROGRAM

The 1989 property exploration program, completed between September 9 and October 16, consisted of helicopter-supported reconnaissance prospecting, geological mapping, and geochemistry (lithochemical, stream silt, and heavy mineral sampling).

A total of 14 rock, 6 stream silt, and 2 heavy mineral samples were forwarded to Bondar-Clegg & Company in Vancouver for multi-element analyses; Au by fire assay-AA and the remaining 29 elements by I.C.P. (results are presented in the Appendix, along with rock sample descriptions).

The accompanying map depicts the property geology (modified after Britton et al., 1989), with 1989 prospecting traverses, sample locations, and Au/Ag/As/Sb analytical results. Descriptions of the exploration completed and the results follow.

#### ROCK GEOCHEMICAL SAMPLING

Reconnaissance prospecting and geochemical sampling were completed over selected parts of the property. This work was concentrated in the upland areas and in the drainage courses of the claim, where rock exposures were most abundant.

The property is underlain by an assemblage of northerly striking interbedded argillite, chert, quartzite, and siltstone of the Upper Triassic Stuhini Group. Feldspar porphyry dykes were found intruding these sediments in the area adjacent to the southwest property boundary.

Brecciated chert containing a stockwork of quartz stringers was located in the west-central portion of the claim. However, lithochemical samples in the area did not yield anomalous results. One sample (KCR-028), located directly east of this area, yielded an elevated strontium (721 ppm Sr) value.

Two samples of highly fractured and sheared black argillite yielded weakly elevated Au and As (KCR-026: 105 ppb Au, 359 ppm As; KVR-055: 85 ppb Au, 169 ppm As). This area should be re-investigated as to the significance of these elevated values. Three samples of grey quartzite yielded weakly elevated strontium (KER-80: 103 ppm; KER-81: 138 ppm; KPR-82: 144 ppm) values.

Since only a small portion of the CHARLOTTE 3 claim was investigated during the current exploration program, additional exploration consisting of reconnaissance prospecting, geological mapping, and lithogeochemical sampling is required to fully evaluate the area. Particular attention should be given to the west end of the claim where the underlying rocks have been brecciated, and to the east and west ends which were not investigated during the 1989 exploration program.

#### STREAM SILT SAMPLING

Stream silt geochemical sampling was conducted on the property as part of the current exploration program. Stream silt samples were collected whenever streams were crossed during reconnaissance prospecting traverses. The designation of anomalous values is based on regional G.S.C. survey results in Open File 1645 combined with a visual observation of data obtained during the 1989 exploration on a number of claim groups in the Unuk River area.

Six silt samples were collected from the property. Four of these were from the creek draining an area of brecciation and quartz stockwork development. All of the samples yielded elevated silver and/or arsenic values and weakly elevated zinc values.

	<u>Ag ppm</u>	<u>As ppm</u>	<u>Zn ppm</u>
KCL-31	<u>1.5</u>	83	457
KVL-13	<u>0.7</u>	<u>122</u>	327
KVL-14	<u>1.6</u>	69	452
KVL-15	<u>1.2</u>	55	361

Sample KZL-32, from the east-central portion of the claim, yielded an elevated gold (99 ppb) value.

Additional exploration is required in the drainage area of each of these sample sites, to determine the significance of these elevated values.

### HEAVY MINERAL SAMPLING

A heavy mineral stream sediment sampling survey was conducted by Mr. M. Waskett-Myers of Keewatin Engineering Inc. which company has done a considerable amount of work in the Unuk River area, and in the process, has assembled a fairly substantial data base. These data were used to assess the values obtained on the property. Heavy mineral samples were collected in parts of a creek where there is a sudden transition from high to low energy; if present, moss mat was used. Samples were sieved to -20 mesh and a 3 to 5 kg sample of sieved material was collected.

The samples were forwarded to Bondar-Clegg and Company in Vancouver for multi-element analyses: Au by fire assay-AA and the remaining 29 elements by I.C.P. The heavy mineral separation consists of floating off the light (<3.3) minerals using methylene-iodine followed by magnetic separation. A sample weight of 0.5 grams is taken for the I.C.P. and the remainder used for fire assay.

Heavy mineral sampling is a good first-pass tool and should be considered as a micro-prospecting approach to evaluating an area. Two heavy mineral samples were collected directly south of the claim boundary, from creeks draining the western portion of the property.

Sample KWH-32, from a creek paralleling the western claim boundary, yielded elevated to anomalous values for Au (3847 ppb), Ag (3.2 ppm), and Zn (728 ppm). There was no exploration completed along this draining course during the current program. Reconnaissance prospecting is required in this area and stream silt samples should be collected at regular intervals along the drainage.

Sample KWH-31 yielded elevated values for Ag (5.5 ppm), Cu (733 ppm), and Zn (1272 ppm). Reconnaissance prospecting in this drainage area located brecciated chert containing a stockwork of quartz stringers; however, no mineralization was located. Stream silt samples collected along this drainage course yielded elevated Ag, Zn, and/or As values. Additional exploration is required in this drainage area to determine the significance of these elevated values.

### SUMMARY AND RECOMMENDATIONS

The 1989 exploration program consisted of helicopter-supported reconnaissance prospecting, geological mapping, and geochemical sampling, with the objective of evaluating the property's potential for hosting economic precious metals deposits.

Brecciated chert containing a stockwork of quartz stringers was located in the west-central portion of the claim; however, the lithochemical samples collected in this area did not yield any anomalous geochemical values. Two samples of highly fractured and sheared black argillite yielded weakly elevated Au and As values.

Stream silt samples were collected whenever streams were crossed during reconnaissance prospecting. Stream silt samples collected from the creek draining this area of brecciation and quartz stockwork development yielded elevated Ag, As, and Zn values.

Two heavy mineral samples were collected from the creeks draining the western portion of the property and yielded elevated Ag, Cu, and Zn values. One sample yielded an anomalous gold value of 3847 ppb.

Considering the limited amount of exploration completed on the claim, additional work is required in order to fully evaluate the property's mineral potential. This work should consist of extensive reconnaissance prospecting combined with geological mapping, lithochemical sampling, and stream silt sampling.

Particular attention should be given to the west end of the claim where the underlying rocks have been brecciated, and to the east and west ends of the claim which were not investigated during the 1989 exploration program. Stream silt samples should be collected at regular intervals along the creek paralleling the western claim boundary (from which a heavy mineral sample yielded an anomalous gold value), along with extensive prospecting and lithochemical sampling.

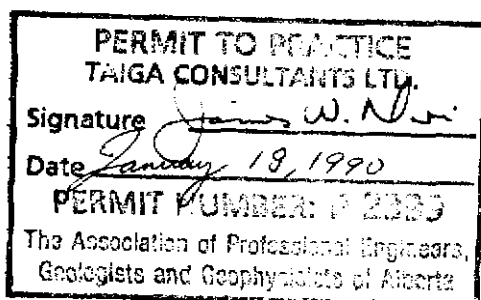


CERTIFICATE - C. H. Aussant

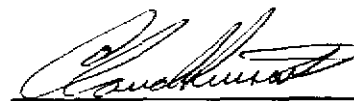
I, Claude Henry Aussant, of 31 Templebow Way N.E. in the City of Calgary in the Province of Alberta, do hereby certify that:

1. I am a Consulting Geologist with the firm of Taiga Consultants Ltd. with offices at Suite 400, 534 - 17th Avenue S.W., Calgary, Alberta.
2. I am a graduate of the University of Calgary, B.Sc. Geology (1976), and I have practised my profession continuously since graduation.
3. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and I am a Fellow of the Geological Association of Canada.
4. I am the author of the report entitled "Geological, Prospecting, and Geochemical Report on the CHARLOTTE 3 Mineral Claim, Skeena Mining Division, British Columbia", dated November 6, 1989. I personally worked on the property during the program described herein.
5. I do not own or expect to receive any interest (direct, indirect, or contingent) in the property described herein nor in the securities of Backer Resources Ltd., in respect of services rendered in the preparation of this report.

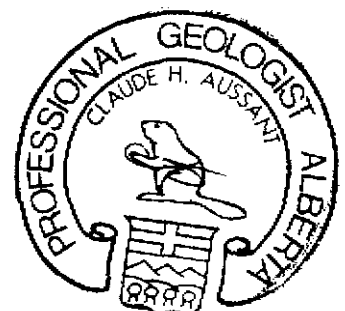
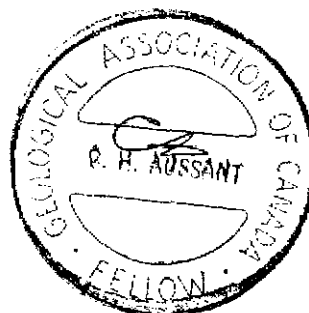
DATED at Calgary, Alberta, this 6th day of November, A.D. 1989.



Respectfully submitted,



C. H. Aussant, B.Sc., P.Geol., F.GAC




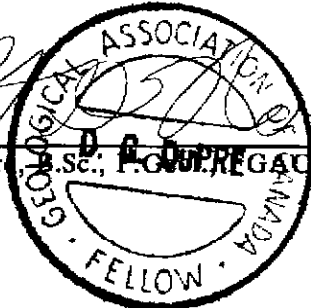
**CERTIFICATE**

I, **DAVID GEORGE DuPRE**, of 56 Parkgrove Crescent in the Municipality of Delta in the Province of British Columbia, do hereby certify that:

- 1) I am a graduate of the University of Calgary, B.Sc. Geology (1969), and have practised my profession continuously since graduation.
- 2) I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and I am a Fellow of the Geological Association of Canada.
- 3) I am a consulting geologist with the firm of Keewatin Engineering Inc. with offices at Suite 800 - 900 West Hastings Street, Vancouver, British Columbia.
- 4) I am the co-author of the report entitled "Geological, Prospecting, and Geochemical Report on the **CHARLOTTE 3 Mineral Claim**, Skeena Mining Division, British Columbia", dated November 6, 1989. I personally supervised the work on the property and visited the site on two occasions between September 6 and October 15, 1989.
- 5) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in the securities of **Backer Resources Ltd.**, in respect of services rendered in the preparation of this report.

Dated at Vancouver, British Columbia this 6th day of November, A.D. 1989.

Respectfully submitted,

  
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David G. DuPre, B.Sc., F.G.A.G. 

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## A P P E N D I X

Summary of Personnel  
 Rock Sample Descriptions  
 Certificates of Analysis  
 Analytical Techniques

\*\*\*\*\*

SUMMARY OF PERSONNEL

<u>Name / Address</u>	<u>Position</u>	<u>Dates</u>	<u>Man Days</u>
C. H. Aussant Calgary, Alberta	Project Geologist	Sep.9-Oct.16	1.50
B. C. Beattie Calgary, Alberta	Assistant Geologist	Sep.9-Oct.16	1.50
M. Waskett-Myers Vancouver, B.C.	Geochemist	Sep.9-Oct.16	0.50
B. McIntyre Vancouver, B.C.	Senior Prospector	Sep.9-Oct.16	0.50
S. Hardlotte LaRonge, Sask.	Senior Prospector	Sep.9-Oct.16	1.50
Don McLeod LaRonge, Sask.	Senior Prospector	Sep.9-Oct.16	1.50
Dennis McLeod Stanley Mission, Sask.	Junior Prospector	Sep.9-Oct.16	1.50
Irvine Roberts Stanley Mission, Sask.	Junior Prospector	Sep.9-Oct.16	1.50
C. Oevermann Smithers, B.C.	Cook	Sep.9-Oct.16	1.00
		TOTAL	<u>11.00</u>

ROCK SAMPLE DESCRIPTIONS

	<u>Au ppb</u>	
KCR-026	105	grab o/c; black argillite, rusty weathered, 1% diss Py, highly fractured, numerous calcite fracture fillings, slickensides on foliation planes
KCR-027	19	subcrop; grey chert, weak rusty weathering, minor diss Py
KCR-028	6	grab o/c; pale grey chert, N-S strike, 1% diss fine pyrite, minor quartz stringers
KCR-029	8	grab o/c; pale grey chert, brecciated, freq quartz stringers and stockwork, minor diss pyrite, occ spots of Py fracture filling, weak rusty weathering
KCR-030	6	grab o/c; brecciated chert and interbedded argillite; sample of brecciated cherty argillite, 1-2% diss pyrite, numerous quartz stringers (stockwork), bedding -horizontal
KVR-055	85	float; argillite, rusty weathered, sheared, diss Py, numerous small (1-4 mm diameter) quartz veinlets
KVR-056	12	grab o/c; pale greenish grey sandstone, <1% diss pyrite, occ quartz stringers
KER-078	15	grab o/c; grey chert, strike 360°, 3-5% diss pyrite
KER-079	<5	grab o/c; grey chert, 1% diss pyrite
KER-080	<5	float; grey quartzite, with quartz-carbonate stringers
KER-081	<5	grab o/c; grey quartzite
KPR-081	48	grab o/c; grey chert, 3-5% diss fine pyrrhotite
KPR-082	17	float; cherty sandstone, mottled light and dark grey, 1% diss pyrite
KPR-083	58	grab o/c; cherty sandstone, light to medium grey, <1% diss pyrite

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PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPM	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
R2 89KC-R 026	charlotte #3	105	4.1	59	62	<0.5	<2	<1	9	8	15	32
R2 89KC-R 027		19	0.3	13	48	<0.5	<2	<1	19	<1	92	19
R2 89KC-R 028		6	<0.2	6	187	<0.5	5	<1	76	6	20	17
R2 89KC-R 029		8	<0.2	18	43	<0.5	<2	<1	15	1	195	36
R2 89KC-R 030	charlotte #3	6	0.3	12	58	<0.5	<2	<1	7	4	95	21
R2 89KP-R 081	charlotte #3	48	0.4	7	14	<0.5	<2	<1	<5	15	61	203
R2 89KP-R 082		17	0.4	22	81	<0.5	<2	<1	18	21	12	105
R2 89KP-R 083	charlotte #3	58	0.4	41	68	<0.5	<2	<1	9	10	44	17
R2 89KV-R 055	charlotte #3	85	3.8	169	109	<0.5	2	<1	11	4	19	31
R2 89KV-R 056	charlotte #3	12	0.8	25	133	<0.5	3	<1	11	17	24	125



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PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
R2 89KC-R 026		5	2	9	4	3	3	35	51	14	2	<20
R2 89KC-R 027		4	10	1	3	2	2	17	<20	<5	<1	<20
R2 89KC-R 028		17	35	19	1	29	13	<2	71	15	3	<20
R2 89KC-R 029		4	4	<1	<1	3	16	14	<20	<5	<1	<20
R2 89KC-R 030		13	2	6	1	8	9	3	76	<5	1	<20

R2 89KP-R 081		19	2	6	5	10	31	15	<20	7	6	<20
R2 89KP-R 082		15	6	8	3	12	9	39	35	11	6	<20
R2 89KP-R 083		7	4	3	6	4	13	35	28	5	2	<20
R2 89KV-R 055		12	3	10	11	6	4	52	48	20	3	<20
R2 89KV-R 056		20	3	19	2	10	21	71	34	9	3	<20



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PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	U PPM	N PPM	Y PPM	Zn PPM	Zr PPM
R2 89KC-R 026		12	<10	<10	23	<10	4	53	1
R2 89KC-R 027		9	<10	<10	1	<10	3	39	4
R2 89KC-R 028		721	<10	<10	60	<10	10	54	2
R2 89KC-R 029		7	<10	<10	3	<10	<1	27	<1
R2 89KC-R 030		60	<10	<10	11	<10	3	40	<1

R2 89KP-R 081		23	<10	<10	128	<10	5	79	4
R2 89KP-R 082		144	<10	<10	73	<10	9	113	<1
R2 89KP-R 083		24	<10	<10	14	<10	4	26	3
R2 89KV-R 055		41	<10	<10	26	<10	5	46	1
R2 89KV-R 056		86	<10	<10	71	<10	7	235	1



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PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPM	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
BZ KE-R 078	<i>charlotte</i>	15	0.2	22	78	<0.5	4	<1	13	21	15	32
BZ KE-R 079	<i>↑</i>	<5	<0.2	14	75	<0.5	4	<1	23	7	37	15
BZ KE-R 080	<i>↓</i>	<5	<0.2	14	68	<0.5	8	<1	5	28	172	36
BZ KE-R 081	<i>charlotte</i>	<5	<0.2	65	262	<0.5	21	<1	6	59	274	63

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PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
R2 KE-R 078		17	4	18	3	6	8	19	63	14	5	<20
R2 KE-R 079		12	9	4	<1	6	1	3	78	7	2	<20
R2 KE-R 080		20	1	19	1	15	61	<2	24	17	17	<20
R2 KE-R 081		53	<1	40	24	32	114	29	<20	71	73	<20

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PAGE: 1C

SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
R2 KE-R 078		44	<10	<10	109	<10	8	86	2
R2 KE-R 079		24	<10	<10	18	<10	11	50	4
R2 KE-R 080		203	<10	<10	112	<10	10	63	1
R2 KE-R 081		138	<10	44	202	<10	19	93	5

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Geochemical  
 Lab Report

A DIVISION OF INDIAN PEI INSPECTION & TESTING SERVICES

DATE PRINTED: 23-OCT-89

REPORT: V89-06999.0

PROJECT: UNUK

PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
T1 89KC-L 31	charlotte #3	45	1.5	83	267	<0.5	2	5	25	23	24	114
T1 89KO-L 72	charlotte #3	44	0.3	53	121	<0.5	4	2	21	22	18	45
T1 89KV-L 13	charlotte #3	37	11.7	122	187	<0.5	3	2	29	24	18	78
T1 89KV-L 14	↓	25	1.6	69	182	<0.5	<2	5	16	15	19	82
T1 89KV-L 15	charlotte #3	25	1.2	55	122	<0.5	<2	4	25	24	30	111

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

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REPORT: V89-06999.D

PROJECT: UNUK

PAGE 10

SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
T1 89KC-L 31		11	12	10	33	6	86	22	<20	21	5	<20
T1 89KO-L 72		16	10	9	4	11	23	22	<20	12	3	<20
T1 89KV-L 13		12	12	16	21	5	53	12	<20	21	5	<20
T1 89KV-L 14		10	9	6	12	8	88	10	<20	17	1	<20
T1 89KV-L 15		11	14	10	22	8	76	13	<20	14	4	<20

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 Lab Report

A DIVISION OF INSTITUTE INSPECTION & TESTING SERVICES

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REPORT: V89-06999.D

PROJECT: UNUK

PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
T1 89KC-L 31		60	<10	<10	75	<10	16	457	2
T1 89KO-L 72		87	<10	<10	53	<10	14	179	6
T1 89KV-L 13		83	<10	<10	68	<10	13	327	4
T1 89KV-L 14		136	<10	<10	39	<10	13	452	1
T1 89KV-L 15		69	<10	<10	64	<10	16	361	2

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# Geochemical Lab Report

A DIVISION OF INDIAN PE INSPECTION & TESTING SERVICES

DATE PRINTED: 23-OCT-89

REPORT: V89-06999.0

PROJECT: UNUK

PAGE 2A

SAMPLE NUMBER	ELEMENT UNITS	Au PPM	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
T1 89K7-1 32 CHARLOTTE		0.4		55	113	<0.5	2	<1	18	21	16	59

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Geochemical  
 Lab Report

A DIVISION OF INSRBC MPF INSPECTION & TESTING SERVICES

DATE PRINTED: 23-OCT-89

REPORT: V89-06999.0

PROJECT: UNUK

PAGE 2B

SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
T1 89KZ-3 32		10	12	9	4	7	24	22	<20	14	4	<20



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# Geochemical Lab Report

A DIVISION OF INDIAN PE INSPECTION & TESTING SERVICES

DATE PRINTED: 23-OCT-89

REPORT: V89-06999.0

PROJECT: UNUK

PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	U PPM	Y PPM	Zn PPM	Zr PPM
J1 8762-1 32		65	<10	<10	57	<10	16	217	7

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: V89-06781.D ( COMPLETE )

REFERENCE INFO:

CLIENT: KEFWATIN ENGINEERING INC.  
 PROJECT: PARADIGM

SUBMITTED BY: TERRANIN RES. LAB  
 DATE PRINTED: 4-OCT-89

ORDFR	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	93	5 PPB	FIRE-ASSAY	Fire Assay AA
2	Ag	93	0.2 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
3	As	93	5 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
4	Ba	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
5	Be	93	0.5 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
6	Bi	93	2 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
7	Cd	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
8	Ce	93	5 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
9	Co	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
10	Cr	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
11	Cu	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
12	Ga	93	2 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
13	La	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
14	Li	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
15	Mo	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
16	Nb	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
17	Ni	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
18	Pb	93	2 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
19	Rb	93	20 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
20	Sb	93	5 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
21	Sc	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
22	Sn	93	20 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
23	Sr	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
24	Ta	93	10 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
25	Te	93	10 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
26	V	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
27	W	93	10 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
28	Y	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
29	Zn	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma
30	Zr	93	1 PPM	HNO3-HCL HOT EXTR	Ind. Coupled Plasma

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: V89-06781.0 ( COMPLETE )

REFERENCE INFO:

CLIENT: KEEWATIN ENGINEERING INC.  
PROJECT: PARADIGM

SUBMITTED BY: TERRAMIN RES. LAB  
DATE PRINTED: 4-OCT-89

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
T STREAM SEDIMENT, SILT	41	1 -80	41	DRY, SIEVE -80	41
R ROCK OR BED ROCK	52	2 -150	52	CRUSH, PULVERIZE -150	52

REPORT COPIES TO: KEEWATIN ENGINEERING INC.  
TAIGA CONSULTANTS LTD.

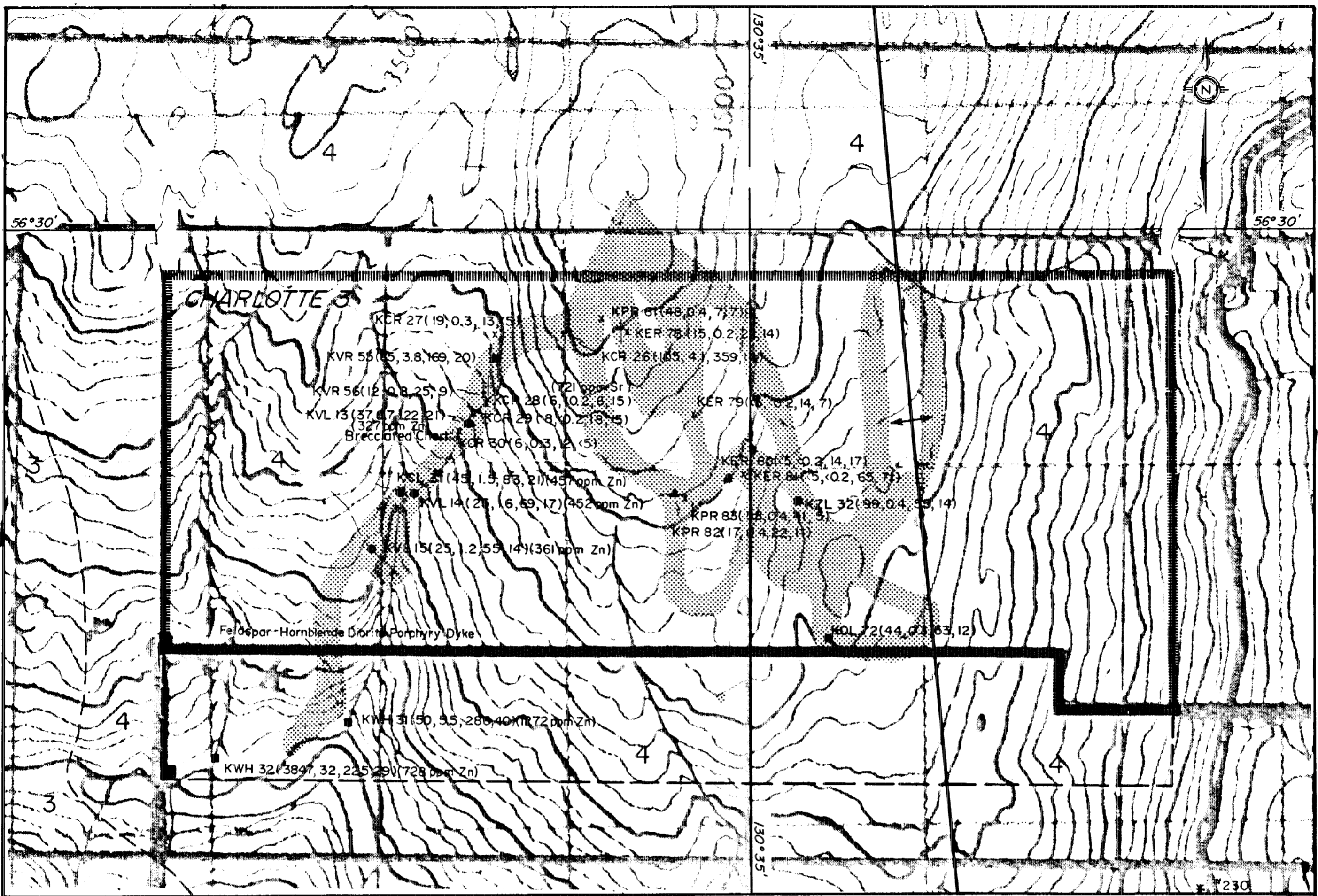
INVOICE TO: KEEWATIN ENGINEERING INC.

ACHILLES PROPERTY  
HEAVY MINERAL RESULTS

LAB NUMBER	FIELD NUMBER	LOCATI	Au(30g) (ppb)	Ag (ppm)	As (ppm)	Ba (ppm)	Be (ppm)	Bi (ppm)	Cd (ppm)	Ce (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Ga (ppm)	La (ppm)	Li (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)	Rb (ppm)	Sb (ppm)	Sc (ppm)	Sn (ppm)	Sr (ppm)	Ta (ppm)	Te (ppm)	V (ppm)	U (ppm)	Y (ppm)	Zn (ppm)	Zr (ppm)
75770015	89 K WKS1	ACH 50	5	286	80	-0.5	7	14	41	38	57	733	-2	21	4	50	7	148	21	162	40	6	-20	218	-10	-10	68	-10	74	1272	5	
75770016	89 K WKS2	ACH 3847	3.2	225	211	-0.5	10	5	21	51	80	290	-2	5	5	49	-1	127	10	172	29	5	-20	74	-10	-10	117	-10	20	728	7	

**SUMMARY OF EXPENDITURES****Charlotte #3**

<b>Personnel and Crew</b>	<b>\$ 4,106.15</b>
<b>Transportation</b>	
- helicopter/fixed wing/fuel	<b>2,279.75</b>
<b>Camp</b>	
- food/accommodation	<b>738.00</b>
<b>Assay/Report/Drafting/Secretarial</b>	<b><u>2,147.45</u></b>
<b>TOTAL EXPENDITURES:</b>	<b><u>\$ 9,271.35</u></b>



**LEGEND**

**Volcanic Sedimentary Rocks**

- 1 Pleistocene to Recent  
Basalt flows and tephra: dark brown to black, minor pillow lavas
- 2 Lower Jurassic (Pliensbachian to Toarcian)  
Betty Creek Formation: pyroclastic-epiclastic sequence, heterogeneous, grey-green, massive to bedded, pyroclastics and sedimentary rocks (black, thinly bedded siltstone, shale, and argillite)
- 3 Upper Triassic to Lower Jurassic (Norian to Sinemurian)  
Unuk River Formation: andesite sequence, green and grey, intermediate to mafic volcanics and flows, with locally thick interbeds of fine-grained immature sediments, minor conglomerates, and limestone
- 4 Upper Triassic (Carnian to Norian)  
Stuhini Group: brown, black, grey; mixed sedimentary rocks (siltstone, shale, argillite, limestone, chert), with minor mafic to intermediate volcanics and volcaniclastic rocks

**Intrusive Rocks**

- 5 Tertiary  
Post-Tectonic Dykes  
King Creek Dyke Swarm: feldspar porphyry dacite, andesite, diabase, and hornblende to quartz diorite; limits of the unit shown indicate where the dykes exceed 50% of the exposed bedrock
- 9 Hawikson Monzonite - fine grained monzonite
- 6 Coast Plutonic Complex: hornblende-biotite-quartz diorite to granodiorite.
- 7 Jurassic  
Unuk River Diorite Suite:  
a) Max: biotite-hornblende diorite, quartz diorite, granodiorite  
b) Melville: hornblende-biotite diorite, quartz diorite

**Metamorphic Rocks**

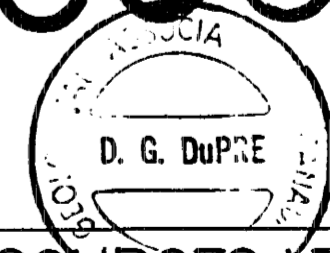
- 8 Metamorphic equivalents of Units 1, 2, or 3  
a) hornblende, mylonite gneiss, mylonite  
b) Unuk-Harrymel Fault Zone, strongly sheared rock within fault zone

**SYMBOLS**

- Geological contact (observed, assumed)
- Bedding with dip
- Foliation
- Regional anticline
- Fault (defined, assumed)
- Airphoto lineament
- Regional stream silt sample site (Au ppb, Ag ppm, As ppm, Sb ppm)
- Minfile mineral occurrence (Cu ppm, Pb ppm, Zn ppm, Au ppb, Ag ppm)
- Rock sample - outcrop (Au ppb, Ag ppm, As ppm, Sb ppm)
- Rock sample - float (Au ppb, Ag ppm, As ppm, Sb ppm)
- Stream silt sample (Au ppb, Ag ppm, As ppm, Sb ppm)
- Heavy mineral sample (Au ppb, Ag ppm, As ppm, Sb ppm)
- Trench
- AREA OF PROSPECTING COVERAGE

**GEOLOGICAL BRANCH ASSESSMENT REPORT 1**

**19,666**



**BACKER RESOURCES LTD.**

**CHARLOTTE PROJECT GEOLOGY & 1989 EXPLORATION LOCATIONS & RESULTS**

DATE: NOV. 1989 NTS: 104 B/7

PROJECT: CHARLOTTE

SCALE: 1:10,000 METRES

KEEWATIN ENGINEERING INC. MAP No. 1